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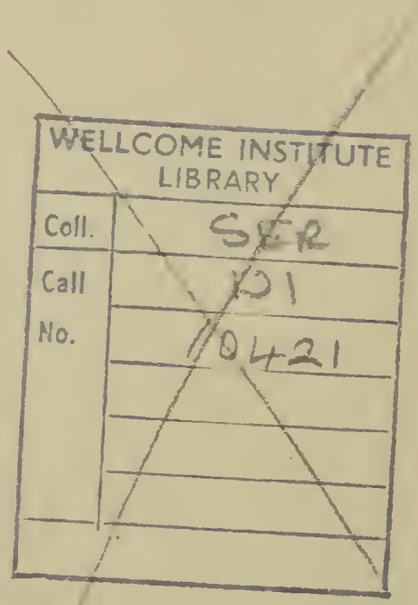

ORIGINAL LECTURES.

CLINICAL LECTURE
ON RETENTION OF BLOOD.

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I use the term "retention of blood" in preference to the term "retention of menses," because in every case blood is certainly retained, whereas in no case is it absolutely certain that the retained blood is menstrual;—it may be retention of menses; it certainly is retention of blood. The circumstances which show that, in any particular case, it is retention of menses, and not of mere blood, I do not propose to enter upon here, because to do so would throw no light upon the subject of the present lecture.

A great and well-known cause of retention of blood in the genital passages of women is atresia. Such retentions get the names of hæmatocolpos when blood is retained in the vagina, hæmatometra when it is retained in the womb, and hæmatosalpinx when it is retained in the tube. But it would be a great mistake to suppose that blood is retained in the genital passages of women only when there is atresia.

Before advancing further, I may just state that there are many diseases of women in which there is retention of blood. In hæmatocele you have retention of blood within the peritoneal cavity; in that disease, indeed, the blood frequently regurgitates from the tube or uterus into the peritoneal cavity, to be retained there. In hæmatoma, or thrombus, in the perimetric or perivaginal cellular tissue, you have retention of blood. Ovarian apoplexy is not a rare disease. Bleeding into an ovarian cyst is not uncommon; and sometimes the bleeding is dangerous from its profuseness, sometimes from the ovary bursting.

These are not such retentions as I propose to speak of to-day, and I shall dismiss in a few words retention of blood in the Fallopian tube or tubes, for this is a subject of which practically or clinically little is known. I spoke of retention of mucus or muco-pus in these tubes in my last lecture.

I shall also say very few words about retention of blood in the vagina. This occasionally happens in ordinary menstruation, especially if it is more copious than usual. The blood lodges in the vagina, coagulates; and clots are expelled during menstruation or after it. The clots may be bright and fresh, or partially changed in colour into dull or dirty brown. It is not, indeed, a very rare thing for menstruating women who retain blood in this way to have fœtid menstrual discharges, fluid blood or clots being not only retained in the vagina, but decomposing and stinking, and coming away with a fœtor which is always and justly not only very disgusting, but also alarming, in consequence of the frequency of fœtor in very dangerous diseases of women.

With these preliminary remarks I come to the first great subject of the lecture—retentions of blood after and in connexion with a recently passed pregnancy, before the womb has regained its unimpregnated condition; and you know that in most women this does not take place until about six weeks have elapsed from the child-birth or abortion.

After I have described these puerperal retentions, I shall describe cases of retention of blood in the virgin womb, or in the organ apart from any connexion with pregnancy.

I begin with the retentions in the puerperal state. Such may take place, first, in a womb which is still large. The retention of lochia is an extremely important subject, which I shall say nothing about here. In addition to retentions of blood in a womb that is still large, you may, secondly, have retentions of blood in a womb which is rapidly increased in capacity, as if for the purpose of containing and retaining the blood.

This dilatation of the womb happens with frequency or facility in proportion to the nearness to the birth, whether of a child at full term or of an abortion. In all cases of retention of blood in the womb it is possible that the womb may expand, but it is especially liable to occur in women who have recently been delivered. Again, this dilatation of the womb is dangerous in proportion to the advancement of the pregnancy. It is not nearly so dangerous in a woman who has an abortion as in one who has recently borne a full-grown child.

Now, this dilatation of the womb is familiar to you all and to every practitioner as a common occurrence in post-partum hæmorrhage. Then the womb not only gets full of blood, but expands, so as to hold a large and, it may be, even a fatal quantity of blood. But when you have such puerperal retentions as I am now discussing you may have a womb expanding, not immediately after delivery, but at a late period after delivery, and before the six weeks of the puerperal state have passed.

Clots often form in the enlarged uterus, and, when this happens, you are generally told that there is a copious watery discharge; the serum of the blood flows out blood-tinted and in the form of a copious watery discharge, to which the nurse or the patient herself may direct your attention.

From a uterus containing a clot you may have further hæmorrhage without displacement of the old clot, the new hæmorrhage flowing round the clot and passing into the vagina, and so forth from the woman's body. Not very long ago I saw a case of this kind, where the clot was retained almost certainly from the time of delivery until three weeks after the birth. Then the woman had a flooding, and after the flooding had proceeded alarmingly for some time, before my arrival there came away, partly in consequence of the treatment, a clot of the shape of the distended uterus, and which proved the condition that I am describing by having on its surface partial decolorisation, a mottled surface, showing that the clot was an old clot which had lain in the uterus almost certainly since the time of the woman's confinement.

When a woman is not perfectly or completely delivered, but has a little bit of placenta or pendulous decidua left attached to or hanging to the womb, then you have arrest of the diminution of the bulk of the womb, and clots are formed in it, generally soft clots, rarely becoming old and decolorised, such as I have mentioned above, but soft clots which are discharged now and again.

Of this condition I have, in a former lecture, given you remarkable examples. To-day I shall give you another; and before I read it I shall say a few words about the polarity of the uterus.

Polarity is a name long ago given to certain functions of the uterus which I shall describe very briefly, because the case is one which illustrates the subject. The same polarity is illustrated in the function of the bladder, and less distinctly in the function of the rectum—that is, in urination and defæcation.

What is polarity of the uterus? It implies an opposite state, as to activity or the reverse, of its two ends; of the lower part of the uterus on the one hand, and of the fundus and upper parts of the uterus on the other—inhibition, as it is nowadays called, at one part, while there is action at the other. And there may be change from inhibition at one part to action in the same, and from action at the other part to inhibition in the same; that is, the reversal of the condition in each of the two parts. These two conditions are co-ordinated to one another both in health and in disease; and the study of this polarity explains a good many things which I wish I had more time to enter upon.

Consider pregnancy. In this state the lower segment of the uterine body keeps continually contracted until the end; but the fundus and body of the uterus are in the state called inhibition; they are expanding, not expulsively acting. When the time of delivery comes, you have the reversal of these conditions: the lower segment of the uterus is in the state of inhibition, while the fundus and body are expulsively operating. These are illustrations of polarity in health; and in disorder of labour, also, it is frequently illustrated. Such a case as this often happens: a woman has a slow labour with a healthy cervix, but the cervix is not dilating; the lower segment will not open. In some such cases—and it is very difficult to diagnose which are the cases fitted for the plan of treatment—you let off the waters. Immediately, the fundus and body of the uterus, being partially evacuated, and consequently much contracted, begin to work vigorously; and in co-ordination with that working by uterine pains the neck of the womb is inhibited and opens almost

suddenly. Another disorder, not very rare, I shall mention, for it is a very perfect illustration of this polarity: the disorder known as hour-glass contraction. This is a case in which you have action of the cervix or lower part of the uterus, while you have inhibition of the upper part; and if you could reverse the conditions the case would be cured. Such a case is generally called hour-glass contraction, but that is only one-half of the disease; it is quite as truly hour-glass expansion, for the contracted part is not the only diseased part: the inactive part above the contraction is quite as much in a morbid condition of inhibition as the contracted part is in a morbid condition of action.

I shall now read you the notes of the case.

M. C., aged forty; married thirteen years; has had six children, the last being born three years ago; had a miscarriage a fortnight before her admission to "Martha." Catamenia began when she was twenty years of age, and have been regular, lasting seven days. Was in good health till the miscarriage, which she thinks was caused by fright, and occurred in the fourteenth week of pregnancy. She was told by her medical attendant that everything had come away. From the miscarriage, for ten days, she had had great pain in the hypogastrium, and continuously lost blood, which was sometimes discharged in clots. Then for two days she lost no blood, but had a profuse watery discharge. After this the loss of blood recommenced. On admission the cervix is open so as to be just permeable by the finger, which discovers nothing near the internal os. The uterus is bulky, the probe entering easily four inches; it is retroverted and retroflected, but easily replaced. Half-drachm doses of the liquid extract of ergot to be given thrice daily. She is extremely anæmic. Pulse 130; temperature 98°. At the visit two days after admission the bleeding and discharge of clots was still great. The cervix uteri is now widely open, so that two fingers may pass easily. Nothing is found in or near the cervix. The uterus is less bulky, and can be felt to contract during examination. As high as the finger can be pushed a fleshy substance can be felt. It is found to be an indurated placental mass, firmly adherent to the uterus, and is removed piecemeal by forceps. An hour afterwards she had a sever rigor with temperature 104·2°; but this passed off, and now for several days she is very well, the bleeding being arrested.

Note the conditions here. At first the cervix was permeable only by one finger, and nothing could be felt as high as it could reach in the cavity of the body of the uterus. Ergot was now given; it brought on active contractions, which could be felt when the woman was examined. This action of the uterus drove nothing into the cervix to dilate it; but it dilated spontaneously, so that after two days of ergot two fingers could be easily passed up into the uterus to remove a firmly adherent placental fragment, the extraction of which by forceps led to the hæmostasis and progressive recovery of the patient.

A disease closely connected with such cases as I have just mentioned is fibrinous polypus. This is a retention of blood, of a clot of blood which becomes indurated and externally decolorised, which retains connexion with adherent shreds of placenta, which has all the symptoms of a polypus, and which lies with its stalk in the body of the uterus, and the body of the polypus generally in the cervix. This mass of retained and adherent blood-clot becomes more and more decolorised externally so as to have a tough fibrinous exterior, and hence its name. It is treated as a polypus is treated.

The best example of retention in connexion with pregnancy is seen in the most characteristic cases of secondary hæmorrhage. To illustrate this I shall mention a case which occurred not many years ago in my own practice. A woman was delivered in natural labour at the full term. Her uterus was found to involve itself naturally until nine days after labour. Then she had sudden copious hæmorrhage. This was secondary hæmorrhage, not from a retained bit of placenta nor of membranes. The copious flooding was only partially external, for the uterus became rapidly dilated to be at least the size of a four-months pregnancy, and was filled with soft clot. The woman was in danger from the hæmorrhage, though there was not much externally, for it was mainly retained. The case was treated just as hæmorrhage would be after delivery: the womb was made to contract, and to maintain the contraction. When emptied of clot it was of the size of a healthy uterus about nine days after delivery in the healthy puerperal state.

I now come to consider cases of retention of blood in the virgin uterus, or in the uterus uninfluenced by recent pregnancy.

Some women have slight discharge of menses, and only pass the blood when they are standing. The flow stops when they lie down. This is explained or explicable in two ways: the blood-pressure, increased by standing, may cause the flow only when the woman is out of bed; but in many women there can be no doubt that the blood does flow in small quantity, and is retained in the womb, and passes out of it on standing.

It is a common thing for women and practitioners to be deluded into supposing that a woman has prolonged menstruation by the circumstance that many women, after menstruating, retain a little blood in the womb, which comes away brownish for days after real menstruation has finished. These days of brownish discharge are not days of menstrual flow, but days of the flow of dissolving, retained, and altered blood. There is the closest analogy between this and blood-tinting of the lochia after delivery by the dissolution of the clots retained in the mouths of the uterine sinuses.

Women in healthy, although not in ordinary menstruation, sometimes pass clots, and the slight pain with which they pass them, and other evidence, prove that these clots had been retained in the uterus and discharged by uterine contraction and opening of the cervix. Such clots are generally small.

But there is a rare condition of the discharge of menstrual clots which is important to know, because you may be misled as to the virtue of a female if you do not know what I am to tell you. This is best told and illustrated by a case which occurred in my own practice very long ago, and in which, being ignorant of the occasional retention of menstrual clots till they are partially decolorised, I had great difficulty in believing that the woman was a virgin, as she asserted. She was a virgin, and there could be no doubt that the clot which she discharged was menstrual. It was of the shape and size of the uterine cavity, and was decolorised upon the surface just as a fibrinous polypus is, but not so thoroughly or deeply. The size of these clots is very small, the cavity of the unimpregnated uterus being in cubic capacity about, or rather under, half an inch. The clot contained in the uterus, as in this case, may expand the uterus without dilating its walls, for you must remember that there is a great difference between the capacity of an ordinary empty uterus (the cavity being then mainly a potential one) and the capacity of a uterus which is expanded—all the difference between a collapsed empty bladder and the same when full. You must not judge, then, from the condition of a healthy unimpregnated uterus, how big a clot it may contain when expanded. An empty bladder contains nothing; but the same expanded, without any alteration except in position of its walls, may hold a pint. So with the virgin uterus.

Whether the uterine cavity expands and dilates in the unimpregnated state so as to contain and retain a large clot, I cannot say. I know of no case of the virgin uterus expanding so as to contain and retain a large clot, say as big as a hen's egg. I do know of cases in which it has expanded so as to contain a large soft clot, but in these cases the cervix was expanded as well, and the clots were not retained for any length of time, were not hard nor decolorised. The women were flooding.

Retention of clots is a common thing in cases of cancer of the body of the uterus or of fibroids; and the blood is expelled in the form of clots, or comes away dissolved as brownish discharge.

I have said that the unimpregnated healthy uterus is not known to expand so as to contain and retain a large clot; and the last thing that I have to say, in regard to these various conditions, is that the diseased uterus not only has its cavity expanded in cases of cancer and of large fibroids, but it is almost certain that it may be expanded when a little polypus is growing upon its internal surface, so as to have a large cavity sufficient in capacity to contain many polypi as big as that one which leads to the dilatation of its cavity. Of this we had a good example in "Martha" a few weeks ago, in a woman whose case presented dangerous conditions, whose pathology was inexplicable, and who died apparently of disease of the stomach. She had a constant brownish discharge from her uterus. On dissecting this woman, there was found adherent, near the fundus, a small

mucous polypus about the size of a hazel-nut. This woman had had a large family, but had not been recently pregnant. Her uterus had a large cavity, and measured four inches and a half from the external os to the end of the fundus. Here there was a distended or dilated cavity filled with blood, which came away in clots, as pure blood, and as brownish discharge, there being always a large quantity retained in the dilated unimpregnated uterus, such dilatation being probably caused by the growth of a small polypus near its fundus.

All these cases are treated on the same principles. You have in ergot of rye a powerful agent, not for inducing pains, but for inducing continuous, or tonic, or permanent contractions—in other words, retraction of the uterus. Ergot of rye, then, in all these cases is an invaluable remedy, from this power which it has over unstriped muscular fibre.

To produce temporary contractions you may resort with advantage, in various circumstances, to the use of cold, suddenly applied, and for a short time. You may also use heat, for heat has very much the same power of stimulating uterine contractions as cold has; indeed, sometimes heat applied externally or applied in the form of a hot vaginal lotion seems to be more powerful than cold similarly applied.

In these cases of retention this is all the treatment—at least, it is the chief part of it. But you have often not only to produce evacuation of morbidly retained blood, but to stop hæmorrhage. Now, in order to stop hæmorrhage, you have, in addition to ergot and heat and cold, two great remedies, the rules for the application of which I have no time to discuss to-day, but which I shall mention only. One is the powerful mechanical remedy of a plug, restraining the flow of blood by counter-pressure, the plug being placed in the vagina or cervix uteri.

Then you have another set of remedies called styptics, which really act also mechanically by clotting the blood or by corrugating and hardening the bleeding surface. These remedies—the plug and styptics—are not remedies for retention, but for bleeding, and I shall only say that our experience of the best styptic, the perchloride of iron, is sufficient to show that you must be very cautious in its use, and not only in the use of it, but of any other styptic, for experience has shown that even in the unimpregnated uterus the styptic may pass into the uterine veins in the broad ligament, and produce changes there—tanning the parts—which would be fatal if the woman survived. Tanning is therefore seen only in cases which have proved fatal from some other cause; and in one case which occurred in "Martha" lately, death was produced by embolism. The styptic had clotted the blood, and the clots had passed into the woman's lungs. You must be cautious, and at present I employ not an iron styptic, but tincture of iodine.

Substitute for Cod-liver Oil.—Dr. Emmet, in his recent work on Gynæcology, recommends the fat of pork, properly prepared, as an excellent substitute for cod-liver oil. A portion of a rib, free from lean, is selected, and soaked in water for thirty-six hours to get rid of the salt, and then boiled slowly, the water being often changed, until the meat is thoroughly cooked. It is to be eaten cold, in the form of sandwiches cut very thin. Thus prepared, it forms, according to Dr. Emmet, a very nutritious and concentrated article of diet, and one which can be often retained by irritable stomachs.—*New York Med. Jour.*, December.

Cholera in Japan.—According to dispatches from Mr. Bingham, Minister of the United States to Japan, and communicated by the Secretary of State to the National Board of Health (*Bulletin* No. 23), official reports show that the total number of cases of cholera which have occurred in Japan from the commencement of the epidemic in April up to October 21 was 156,204, of which number 89,702 (57·43 per cent.) proved fatal. The epidemic is stated to have now virtually ceased throughout the empire. Mr. Bingham expresses the opinion that the number of deaths would have been much fewer if the Government of Japan had been aided instead of being resisted by certain foreign powers in its endeavours to prevent the spread of contagion by land and maritime regulations, and adds that it affords him gratification to know that the efforts of the Government of Japan to save the people of that empire from the pestilence were seconded by his Government.

ORIGINAL COMMUNICATIONS.

TRANSUDATIONS AND EXUDATIONS.

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In the following paper I propose to lay before you the results of some inquiries which I have made on the composition of various transudations and exudations. The transudations were the pleural, peritoneal, cutaneous, and cerebral; the exudations were the contents of abscesses, inflamed bursæ, and inflamed joints. In these inquiries my object has been to discover how much the composition of these fluids is influenced by simple physical processes, more especially by filtration. The action of this in the case of the transudations is obvious, they being simply *filtrates*. The exudations, on the other hand, have not such a simple explanation, but with them also I hope to demonstrate the importance of taking this process into consideration.

Transudations.

Analyses of these occurring in one individual, and due to a general cause, as heart or kidney disease, have been made by several observers. Schmidt(a) gives (page 146) in 1000 grammes transudation—

	Pleura.	Peritoneum.	Cerebral ventricles.	Subcutaneous.
Albumen . .	28·5	11·3	8·0	3·6

He also notes (page 145) that the proportion of the mineral constituents remains nearly constant, about 8 p.m. Hoppe-Seyler(b) (page 257) gives, in a case of general dropsy, in a patient suffering from Bright's disease and bladder catarrh, the following in 1000 parts transudation—

	Pleura.	Peritoneum.	Subcutaneous.
Total solids . .	42·41	32·32	17·83

He also notes that the proportion of salts remains constant about 7 or 8 p.m.

Lehmann,(c) in the dropsical transudations in the dead body of a drunkard with granular liver, found in 1000 parts transudation—

	Pleura.	Peritoneum.	Cerebral ventricles.
Albumen . . .	18·52	10·44	5·64

and makes the same observation as regard the proportion of salts. Similar investigations have been made by many others(d)—Heller, Scherer, Simon, etc.,—and their results, though not obtained from fluids effused under identical conditions, coincide in the main with those given above. I do not, however, give them, because the fluids which I wish here to consider are those which occur under conditions precisely identical, *i.e.*, which are transuded in one individual, simultaneously, and due to a general cause.

On examining these results we find—first, that the amount of mineral matter remains nearly constant in all cases; secondly, that the amount of organic matter presents great variations in individual cases; thirdly, that in the different transudations a distinct relationship can be detected as regards the proportion of organic matter, the pleural being richest in it, the subcutaneous poorest, the peritoneal occupying an intermediate position. Further, from the observations of Schmidt, etc., we may conclude that the fluid of the cerebral ventricles has always a larger proportion of solid residue than the subcutaneous transudation. This relationship in the proportion of organic matter has been expressed by Schmidt in the following rule:—"The quantity of albumen (equal to total solids) contained in a transudation is dependent on the system of capillaries through which the transudation flows."(e) What I now propose to do is to show that, in order to find an explanation for this relationship, we will obtain considerable information by studying the physical conditions existing simultaneously in connexion with the various capillary systems. In the first place, then, if a portion of a fluid holding organic matter

(a) "Characteristik der Epidemischen Cholera," 1850.
(b) *Virchow's Archiv*, vol. ix.
(c) "Physiological Chemistry" (Cavendish Society), vol. ii., page 316.
(d) Becquerel and Rodier differ from others in stating that the peritoneal fluid contains the largest proportion of albumen (Speer's translation, page 479).
(e) Schmidt's "Epidem. Cholera," and Lehmann, page 315.

and salts in solution is made to filter through a membrane, what changes does it undergo?

On this point Hermann says(f):—"True solutions pass through the medium unchanged. Viscid fluids, such as solutions of albumen, starch, and gum, filter less perfectly, a portion only of their contained substances, in amount varying with the pressure, being able to percolate. If, indeed, the pressure is very slight, the whole is retained on the filter. Under slight pressure, therefore, the blood loses, by filtration, water, salts, sugar, etc., which form true solutions, while under a greater pressure it is deprived of more or less of its albumen, fibrinogen, etc."

Thus, then, we see that the amount of organic matter passing through varies directly as the pressure—*i.e.*, that with a high pressure a large quantity of organic matter, and with a low pressure a small quantity, will filter through. These considerations, then, explain clearly why the proportion of salts remains constant; and from them also we might readily conclude that the difference in the proportions of solid constituents effused by the different capillary systems is due to the blood in these capillaries being subjected to different degrees of pressure.

That this occurs, and how this is effected, is what I have to demonstrate. Before doing so, however, let me mention a few other considerations.

We might suppose, for example, that one reason why the fluids transuded into the pleura, peritoneum, and cerebral ventricles were thicker (if I may use the term) than that effused into the subcutaneous tissue is, that in the case of the former the fluids are mixtures of transudation from the capillaries and secretion from the serous membrane, whereas in the latter it is a transudation alone. This, however, although it must be taken into consideration, will not explain why the peritoneal fluid is thicker than that of the cerebral ventricles, and the pleural thicker than either. Again, we might suppose that the blood varies in composition in the different capillary systems, more especially, for example, in the case of those of the abdominal cavity, where we should expect that the performance of the function of absorption is likely to bring this about. Or again, it may be that the pressure varies in the different capillaries, that the capillaries vary as regards the permeability of their walls, or that the absorbent vessels may be more numerous, and the absorbent function more active, in connexion with one of the systems than another. Further, we must remember the connexion of dropsies with nervous lesions.(g) All these are possible agents in producing the variations in the chemical composition of the fluids which we are discussing, and, as such, must be taken into consideration. I trust, however, that I may succeed in demonstrating that in the physical conditions operating in the different cavities we have by far the most important factors.

Let us, therefore, neglecting the special secretory action of the serous membranes, suppose that we have the following alike conditions existing in the various capillary systems—viz., same composition of contained blood, equal permeability of capillary walls, equal activity of absorbents. Let us further suppose that the blood-pressure in the interior of the capillaries is the same, and allow that the fluid transuded into the subcutaneous tissues (which, as we have seen, contains the smallest proportion of solid residue) is the result of this pressure alone. Why is it that transudations into the pleura contain organic matter in so much greater abundance? To understand this we must remember that the lung with its contained air-cells, blood-capillaries, etc., is an elastic structure, and that it is in the thorax always more or less stretched. The amount of this stretching, or, in other words, the collapsing power of the lung, varies, of course, according to the amount of air contained in it.

Hutchinson(h) estimates it in two cases as follows:—

I.—(*a*) Containing breathing volume of air . 8·2 in. water.
(*b*) „ vital capacity „ . 17 „
II.—(*a*) Containing breathing volume of air . 10 „
(*b*) „ vital capacity „ . 20 „

Donders' estimate is 7·5 mm. Hg (less than 4 in. water) at the end of expiration, and 9 mm. Hg (about 4½ in. water) at the end of inspiration, and 30 to 50 mm. Hg (about 15 to 21 in. water) after a forced inspiration.

We must further remember the very great force which the inspiratory muscles are capable of exerting—the force varying, as Hutchinson has shown, from 1·7 to 7 in. Hg. Arguing theoretically, therefore, from the enormous aspiration which the thorax can produce, we might easily imagine that, in cases of increased pressure in the lung capillaries, or still more in cases of obstruction to the entrance of air into the lungs, we should have the transudation of fluid into the pleura correspondingly favoured. To ascertain this point clearly, however, I have tested it experimentally, and the following I give as one of my most successful results:(i)—

The lungs and trachea of a freshly killed cat were taken, washed, and emptied as much as possible of blood. To the pulmonary artery a tube was connected by a canula, this tube communicating with a reservoir of water. The pulmonary veins were ligatured, and it was so arranged that the lungs could be placed under the receiver of an air-pump, the trachea communicating with the outer air by a tube. Water with a head of 13 in. was then passed through in quantities of 100 cc. at the time, and the results noted.

The First 100 cc. passed into lungs in 45 min.,	and of it there transuded into air-passages	8 cc.;	transuded through pleura,	50 cc.;	the rest in the lungs.		
Second „	„ 20 „	„	19 „	„	50 „	„	„
Third „	„ 10 „	„	35 „	„	18 „	„	„
Fourth „	„ 5 „	„	35 „	„	15 „	„	„
(Artificial respiration by air-pump)							
Fifth, 100 cc. passed into lungs in 51 min.		„	5 „	„	90 „	„	„
(Artificial respiration stopped.)							
Sixth, 100 cc. passed into lungs in 12 min.		„	65 „	„	25 „	„	„
(*Trachea tied*; artificial resp. applied.)(k)							
Seventh, 100 cc. passed into lungs in 10 min.		„	— „	„	30 „	lungs extremely œdematous; trachea and bronchi distended with fluid.	

From these experiments we obtain precise information on two very important points: first, that where no hindrance exists to the entrance of air into the air-cells of the lungs, the inspiratory act will favour the transudation of fluid from the lung capillaries into the pleural cavity; and secondly, that when the air-passages are obstructed, this same inspiratory force is for the most part at least expended in causing this fluid to transude into the air-cells. In this latter case there will, however, be transudation into the pleura from the capillaries of the costal parietes. Clinically, therefore, we should expect that, in cases of Bright's disease or of obstruction to the circulation alone, as in heart-affections, *hydrothorax* will result, whilst in cases where the entrance of air into the air-cells is impeded, as in bronchitis, pressure on trachea by tumours, croup, etc., *œdema of the lungs* is in addition most likely to occur.

But it is necessary to examine the mechanism by which, as we have seen, hydrothorax is produced, a little more minutely. Is the aspiration produced by the inspiratory act sufficiently powerful to cause the transudation into the pleura of a fluid much thicker than that transuded into the subcutaneous tissue by intracapillary pressure alone?

If the fluids which we have examined had been from cases with obstructed air-passages we might have had little doubt

(f) Professor Gamgee's translation (second edition), page 122.
( ) Lehmann says, page 318, "that the transudation will be richer in albumen in proportion to the slowness with which the blood passes through the capillaries."

(h) "Cyclopædia of Anatomy and Physiology"—"Thorax."
(i) *i.e.*, In which I consider that the natural conditions were most closely simulated. An interval of about two hours occurred between the second and third quantities (see Table), as I was unfortunately called away at the time.
(k) In applying artificial respiration, care was taken to simulate the positive pressure of expiration as well as the negative one of inspiration; the lungs, however, were constantly distended, *i.e.*, scarcely diminished in size atexpiration.

as regards this, the inspiratory power amounting, as we have seen, to from 1·5 to 7 in. Hg. But the fluids which we are considering were taken from cases (Bright's disease, etc.) where we may assume that there existed no marked obstruction to the entrance of air into the lungs.

The aspiration power, therefore, by which transudation into the pleura is produced, will depend on the elasticity of the lungs alone; and the estimates of this, as we have seen, never exceed 20 in. water. Further, we must remember that as fluid collects in the pleura the lungs will correspondingly retract, and so this power will be gradually reduced in force. The results of Homolle(l) also show that this aspiration power is inconsiderable in amount. In his cases of pleuritic effusion the intrathoracic tension was tested by a manometer, and the greatest negative tension obtained was (Case IV.) 38 mm. Hg in inspiration, and 33 mm. Hg in expiration.(m) This is about 19 and 16 in. water—*i.e.*, less than the collapsing force of the lungs as estimated at the end of the fullest possible inspiration. This aspiration power, therefore, is never very great; and it will be noted in the table that transudation took a long time to occur. On the other hand, we have to remember, however, that the intracapillary pressure must be very small; and it is with this that we must compare it when we wish to judge of its effects. What the intracapillary pressure is we have no precise means of discovering; but when we remember the smallness of the venous pressures, and that the sectional area of the systemic capillaries may be estimated as being 800 times that of the aorta,(n) we can, I think, admit that this aspiration, though equalling no more than 10 or 12 in. water, will have the effect of causing the transudation of a somewhat larger relative quantity of organic matter.

On this subject further experimentation seems desirable, as the results hitherto obtained have not, as far as I am aware, been very definite. Dybkowsky(o) endeavoured to cause an increase in the pleural fluid by ligaturing the aorta below the diaphragm, and by causing paralysis of the thoracic vaso-motor nerves. On killing the animal after a time no fluid was found in the pleura.

He found, however, that fluid introduced into the intercostal tissue always made its way into the pleural cavity.(p)

Apart from this, however, there is another reason why pleural fluid should be thicker than that found in the subcutaneous tissue. Hoppe-Seyler has shown that, in cases of ascites due to cirrhotic liver, the more the fluid increases in amount, the more concentrated does it become.

The explanation of this is, that by the lymphatics and peripheral branches of the systemic veins absorption is constantly going on, and as the water is the constituent of the transudation which is absorbed in most abundance, it (the transudation) is consequently constantly becoming more concentrated. Thus, then, concentration will vary directly with the rapidity of absorption, and as in the chest the negative pressure of inspiration is immediately followed by the less negative or slightly positive (in forced expiration) pressure of expiration, we can easily understand how this process will be favoured.

This hypothesis is directly corroborated by Dybkowsky in the article before mentioned. He found that with solutions of Berlin blue, etc., if these were injected into the pleural cavity of a living dog, absorption rapidly took place; but that this did not occur if the animal were killed immediately after the injection. He also found that the rapidity of absorption increased with the activity of the respiratory movements. The transudation into the pleura, therefore, has a larger proportionate amount of solid residue than that of the subcutaneous tissue as the result of the respiratory acts.

(*To be concluded.*)

(l) *Revue Mensuelle de Médecine et de Chirurgie*, February, 1879: "De la Tension Intrathoracique dans les Épanchements Pleuraux."

(m) The greatest positive pressure which Homolle obtained was (Case II.) 15 mm. Hg at the end of expiration. From these data we can readily understand how, unless in cases of paralysis of the intercostal muscles, as in empyema, "bulging of the intercostal spaces" is so rarely seen.

(n) Of course, I do not propose this as an estimate of the capillary pressure. Küss estimates the systemic capillary pressure as $\frac{12}{100}$ of the atmosphere, about 36 or 48 in. water. The pulmonary capillary pressure would be considerably less.—"Manual of Physiology" (Dr. Amory's translation), page 105. By experiment (N.v. Kriess) it has been estimated in the capillaries of the hand at 38 mm. Hg.—Landois' "Physiologie," page 173.

(o) *Ludwig's Arbeiten*, 1866: "Ueber Aufsaugung und Absonderung der Pleurawand."

(p) I am indebted to my friend Dr. Graham Brown for affording me an opportunity of the perusal of Runeberg's paper, "Ueber die Filtration von Eiweislösungen durch thierische Membranen." Runeberg's results are contrary to those indicated by Hermann, etc., as he found that with increased pressure the amount of albumen which filtered through was not materially increased. How the respiratory movements will favour the transudation of albumen, however, may be imagined from his Conclusion No. 8—"Der albumingehalt des Filtrats ist bei demselben Druckgrad beträchtlich grösser, wenn die Membran einige zeit vorher vom Druck befreit war, als wenn sie unter Einwirkung des Drucks gestanden hat."

OBSERVATIONS ON YAWS.

(A REPLY TO DR. GAVIN MILROY.)

By H. A. ALFORD NICHOLLS, M.D., C.M. Aber., M.R.C.S.,
Medical Superintendent of the Dominica Yaws Hospitals,
Surgeon to the Roseau Infirmary.

BEFORE the emancipation of the slaves in the West Indies, the disease Frambœsia, better known by its African name of Yaws, excited a great deal of attention not only amongst the many able medical men who then practised in these colonies, but also amongst many of the authorities in Europe. In nearly all the works on medicine published in those days were to be found long articles on this disease, and most of these writings might be studied with advantage at the present time. Since the day of emancipation, however, as the West Indies declined in prosperity, and as other and larger possessions were added to England's colonial empire, this curious disease, which for the most part attacked the negroes, has been all but forgotten. Articles on Yaws are no longer written for the periodicals, the disease has ceased to find a prominent place in works on medicine, and but for the researches of two men—Imray of Dominica, and Bowerbank of Jamaica—a blank of nearly forty years would separate the Yaws records of the past from the writings of the present day.

For many reasons, which are too lengthy to enter into here, the subject of Yaws has become one of considerable interest to most of the medical men in the West Indies, as well as to many of the members of the profession in other parts of the world. This interest is just now centred in Dominica, for in this island the disease has of late years made rapid strides, and the Government of the Leeward Islands have undertaken a task—so far as I am aware, never before attempted—namely, that of ridding the country of the disease by the forcible segregation in hospitals of those affected with the malady. Passing by altogether the question of Yaws, the experiment is one which should engage the special attention of those interested in public health, for in Dominica is now being done, as regards Yaws, what has been recommended by some of our ablest and most far-seeing hygienists to be carried out in the eradication of other contagious diseases.

Upon several occasions the opinion of Dr. Gavin Milroy has been sought by the Colonial Office on certain of the measures adopted, or proposed to be adopted, by the Government in their efforts to rid Dominica of Yaws, and Dr. Milroy's Reports have been invariably sent out for the information of those officers concerned. Last July Dr. Milroy was furnished with certain documents, amongst which was my last Report, and he was invited by the authorities at the Colonial Office to make any observations the perusal of the papers might suggest to him. Accordingly, on August 13, he wrote a letter to the Colonial Office, and his article in the *Medical Times and Gazette* of October 11, headed "Observations on Yaws," is this letter with the opening paragraph left out. In due course I received a copy of Dr. Milroy's letter, and, to my surprise, I found it full of what I believe to be unsound reasoning and conclusions hastily arrived at. In reply I wrote a despatch, in which I drew attention to particular passages in the letter, and entered somewhat fully into certain questions on which Dr. Milroy and myself would seem to hold different views. Dr. Milroy has published his official letter without any reference to my rejoinder. I now publish the substance of my reply, suppressing, of course, certain suggestions and remarks which were intended alone for the information of the Government.

The first subject to be considered is the one of diet. There can be no question as to the advisability of giving an ample supply of good nourishing food to all classes and all conditions of men; and if Dr. Milroy had contented himself with recommending an improvement in the dietary of the Central Yaws Hospital, he would merely have been doing what I did before him, and nothing could have been said against this

portion of his letter. The funds at the disposal of the Government for the Yaws Administration are, comparatively speaking, very small; and, in referring to the subject in my last Report, I say, on page 5, "the necessity of economy in the expenditure will not, however, permit of a more costly diet."

The nutrient value of the present dietary seems, however, to be altogether misunderstood by Dr. Milroy, who, in his letter, makes the following remarks (paragraph 7):—"No medical man in this country will be surprised that, with such a dietary in the treatment of a cachectic impetiginous disease, the results have not been so successful as could be desired, whatever may have been the medicinal remedies that are used." I would here remark that the first proposition in this paragraph is an erroneous one, for Yaws is not a cachectic impetiginous disease, as I shall presently show; and I would express my surprise that, after the perusal of my last Report, which proves beyond question that the results last year of the treatment of the patients in the Central Yaws Hospital have been most successful, Dr. Milroy should have unhesitatingly expressed a different view. On page 14 of my Report I say—"The account already given of the fifteen months' work of this Hospital is most reassuring, and it will doubtless be received by the people with feelings of satisfaction"; and I may now add, that this view of the successful working of the Hospital is shared by the Board of Yaws Commissioners and by the Government.

During the time that the Yaws Hospitals have been in operation no less than 1212 patients have been admitted. Of this number 975 have been discharged cured, and only fifty-four have died. These figures are important, for not only do they prove incontestably the success, so far, of the Yaws Administration, but they show the extent to which the disease has prevailed in the island.

As regards the diet, Dr. Milroy goes on to say (paragraph 8):—"Independently of the extreme difficulty of combating a disease like Yaws, under such adverse circumstances as the daily use of so much innutritious and unwholesome food," etc. And again (paragraph 9), in speaking of the vegetables, he says—"Only one sort is mentioned in the dietary as given on Sundays and Thursdays alone." If all this were true of the dietary of the Yaws Hospital, then Dr. Milroy's remarks would be perfectly just, and it would be impossible to say too much against a system which permits of "innutritious and unwholesome food" being given to patients detained *nolens volens* in the Hospitals until they are pronounced by the medical officers to be free from Yaws.

On page 5 of my Report the following occurs:—"In cases of children, and those who are in a debilitated condition [*i.e.*, the subjects of cachexia], a special dietary is allowed, from which salt food is excluded. Two extra meals are given in these cases—one at 7 a.m., consisting of arrow-root and milk, or eggs and milk; and another at noon, which consists of soup made from fresh meat, and to which is added rice or vermicelli." On reference to the dietary, on page 15 of the Report, it will be seen that vegetable soup is supplied on three days of the week. This soup is made from yams, eddoes, peas, beans, ochroes, sweet-potatoes, and many other vegetables when they are in season. On Sundays and Thursdays four plantains, weighing over a pound (or an equivalent in weight of bananas), are given. Thus the patients receive vegetable food on five days of the week, and not on two days, as stated by Dr. Milroy; and instead of the vegetables being confined to one kind, as Dr. Milroy says, nearly every kind of vegetable grown in the country forms part of the food given to the patients. Then, again, it will be seen that the following note occurs at the bottom of the dietary:—"Fresh fish is substituted for salt when it can be obtained." On an average fresh fish is supplied once a week, but it sometimes happens that it is substituted for salt fish on the three days on which the latter is set down.

As regards Dr. Milroy's statement that the food is innutritious and unwholesome, on carefully examining the dietary, I can come to no other conclusion than that he refers to the salt fish, the farine, and the plantains.

Salt fish is the local name given to dried cod-fish, which contains a certain portion of salt added as an antiseptic preservative. Before cooking nearly all the salt is removed, and the fibres rendered soft by soaking in water, and the fish then, although not so nutritious as when fresh, contains a considerable amount of nutriment, and it is by no means unwholesome.

The farine, by which is meant cassava meal, is one of the staple foods of the people of the West Indies and South America. The starch obtained from this meal is known in England as tapioca. Dr. Pavy, in speaking of cassava meal, and the bread made from it, says, "Both these products form important and valuable articles of food to the inhabitants of tropical America. They contain starch, vegetable fibre, and nitrogenous matter."(a) And in the article by Mr. A. Smith in Lindley and Moore's "Treasury of Botany," on *Manihot* (the plant from which cassava is obtained) it is stated that the plants "yield an abundance of wholesome and nutritious food."

Authorities speak even higher of the nutritious qualities of the plantain and banana. Pavy says, "Plantains and bananas furnish important and valuable articles of food to the inhabitants of many tropical regions. They even afford in some localities the chief alimentary support of the people."(b) In the article on *Musa*, in the "Treasury of Botany," Dr. Masters says—"Plantain-meal is obtained by powdering the dry fruit; it is very nutritious, and it contains not only starch, but protein or flesh-forming material. The natives of many parts of India live almost entirely on plantains." Lindley remarks—"They are most valuable plants (the *Musaceæ*) for the abundance of nutritive food afforded by their fruit, called in the tropics plantains and bananas."(c) Many other authorities might be quoted to the same effect, but it is unnecessary. It thus appears from the incontrovertible evidence of the highest authorities that the food which Dr. Milroy calls "unwholesome and innutritious" is, in reality, very wholesome and very nutritious. And when it is remembered that this diet is only given to those who are strong and vigorous—as the majority of the Yaws patients are—and that they thrive on it, and that they could get nothing so good in their own homes, Dr. Milroy's remarks on the subject call for considerable modification.

It is seen on perusal of Dr. Milroy's letter that he lays great stress on the opinion that the disease is a "cachectic impetiginous" one, and that all his arguments and opinions are based on this belief. He says (paragraph 1)—"In Cullen's 'Nosology,' Yaws is included in the class 'Cachexiæ,' and order 'Impetigines' of diseases." . . . . "It is thus clearly seen what was the view which Cullen held as to the nature or physiology of the disease of Yaws." Cullen wrote about the middle of last century, and it is certainly strange that Dr. Milroy should go so far back to search for a definition of Yaws; the strangest part of it too is the fact that Cullen acknowledges that he never saw the disease. In my copy of Cullen's "Nosology," published in Edinburgh in 1810, I find on page 151 the following footnote:—"With regard to Elephantiasis, Lepra, Framboesia (Yaws), and Trichoma, as I have not seen these diseases I dare not be more particular." I fail to find, also, any notice of Yaws in Cullen's work on the "Practice of Physic," published in Edinburgh in 1802. These facts alone would point to the injudiciousness of taking Culleu as an authority on Yaws; but when we find, a few years after Cullen wrote, eminent West Indian practitioners, who had large experience of the disease, recording in their works that Cullen was wrong in placing Yaws with the cachectic maladies, it is certainly difficult to understand why Dr. Milroy should have quoted Cullen as an authority in this matter.

In 1802, Dr. William Wright, in editing Dr. Grainger's essays on West India Diseases, says—"Dr. Cullen and other nosologists have classed the Yaws amongst the cachexiæ, whereas it ought to be amongst the exanthemata." Dr. David Craigie remarks—"The true nosological nature of the disease was, however, imperfectly understood by European physicians; for Sagar placed it amongst the Tubera or cachectic diseases with external swellings, and Cullen followed the example set by Sauvages in placing it among the cachectic maladies with syphilis, scurvy, *elephantiasis*, and leprosy." . . . "Dr. William Wright . . . had the merit of first rectifying the erroneous notions to which the arrangement of the disease by Sauvages and Cullen had given birth."(d) This is very interesting, for it shows that not only was Cullen wrong, but that the arrangement was not his own, he having borrowed it from a French physician.—Sauvages. In connexion with this subject it may be mentioned that Tilbury Fox, whose name stands amongst the

(a) "A Treatise on Food and Dietetics." London, 1875. (b) *Ibid.*
(c) "The Vegetable Kingdom," third edition. London, 1853.
(d) "Elements of the Practice of Physic." Edinburgh, 1836.

first authorities on such diseases, discards Cullen's views, and, although expressing a doubt as to the true nature of Yaws, he places it under the head of exanthemata. The majority of the patients admitted to the Yaws Hospitals in Dominica are not the subjects of cachexia, and of those who are cachectic the condition can be traced more to neglect and to other external causes than to the disease itself.

(To be continued.)

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

LONDON HOSPITAL.

STRANGULATED INGUINAL HERNIA—RUPTURE OF THE GUT—HERNIOTOMY—RECOVERY.

(Under the care of Mr. ADAMS.)

WILLIAM Y., aged forty-two years, a labourer, was admitted at 11.45 p.m. on August 7, with a large hernia filling the right scrotum. He stated that he had been ruptured for about six or seven years, and had been obliged to wear a truss in consequence.

On the day of admission, as he was going home from work about six o'clock, his truss broke, and by the time he had walked home (a distance of two miles and a half) the rupture had come down and filled the scrotum. The swelling had never been so large before, and on previous occasions he had always been able himself to reduce it completely. This time he had had great pain in the tumour and in the abdomen from the first. He had had no hiccough, and had only vomited once. He had himself made several unavailing attempts to put back the hernia, and a medical man whom he had called in had also tried to reduce it, and had failed. On examination the tumour was found to be dull on percussion; it was not very tense, and yielded no impulse on coughing. As the symptoms were not very urgent, a cautious application of the taxis was made by the House-Surgeon without result, and patient was then put to bed with the legs elevated, and an ice-bag applied to the scrotum. During the following day the patient was very sick several times, the vomited matter being either curdled milk or bile-coloured fluid. Mr. Adams had the patient put under the influence of ether, and again tried to reduce the tumour, but without success. At 8 p.m. patient complained of a good deal of pain in the region of the stomach; the pulse was full, rapid, but not wiry; and he had vomited once or twice since the afternoon. At 11.30 p.m., as the symptoms were not subsiding, Mr. Adams made an incision down over the neck of the sac to the gut. When the sac was opened, the bowel (small intestine) was found to be red and deeply congested; it was gently returned into the abdomen, and, as its complete reduction was almost effected, there was a gush of thickish grumous fluid, which was recognised to be the contents of the intestines, and the aperture of escape was easily found. The bowel at this portion was somewhat thickened and very soft, and had flakes of lymph upon it. Another portion of the gut, close to the place of rupture, was also roughened, and looked as if it had been adherent to the sac. This appearance led Mr. Adams to doubt the history given by the patient as to the previous entire reduction of the tumour. It afterwards was found that, not content with the attempts of others to reduce the hernia, patient himself while in bed had tried by pressing the tumour between his thighs to get it back, and it was supposed that his violent and misdirected efforts had weakened the gut and caused it to give way. The edges of the ruptured intestine were brought together by catgut sutures, and the parts were returned into the abdomen. The external wound was stitched up, and a pad and firm bandage applied. A morphia subcutaneous injection was given.

August 9.—Patient has slept a little during the night, and has vomited once or twice slightly. He complains of pain, and begs that his abdomen, which is swollen, should not be touched. His face is flushed; pulse 108, full and bounding; temperature 101·2°. A grain of opium has been ordered, and he is to have milk and ice only. 4.30 p.m.: He looks less flushed and anxious, his pulse is not so rapid and the swelling of the abdomen is not increasing. He has had a little vomiting. 9.15 p.m.: Pulse 100; temperature 101°. He is perspiring, but does not look anxious or in much pain.

10th.—11.30 a.m.: The skin is cool, not perspiring; pulse quiet and steady; temperature 98·6°. The wound looks healthy; there is no tension on the sutures and no discharge. The abdomen is less distended, and the wound has been dressed this morning. A brownish mark is present along the track of the lymphatics in the groin. 8 p.m.: The intestine has slipped back into the scrotum; most of the stitches of the external wound have been taken out, but no fæcal matter has escaped even on squeezing. The pulse is hard and wiry, about 100; skin perspiring; temperature 100·6°; the abdomen does not feel more tense than it was.

11th.—This morning the patient does not complain of pain, and lies quietly in bed. He has not vomited since last night. Pulse is 98, full and incompressible; temperature 99·6°.

12th.—The wound does not look clean, but patient seems no worse. Pulse is 84, steady and full; temperature 99·4°. The skin of the scrotum is hot and inflamed. The bowels were relieved yesterday for the first time, and were again open to-day.

13th.—Patient's aspect is much improved to-day, his face looking quiet and easy. The wound is being poulticed and is only very slightly painful. Patient can now bear percussion over the abdomen, which is less distended. The skin is cool; pulse 78; temperature 99°. There has been no return of the sickness, but he still takes ice and milk, and complains now of feeling hungry.

14th.—He has had pain in the right side all night, and has slept badly. The abdomen is a little more distended. The skin is cool; pulse 96; temperature 100°.

15th.—His face is a little flushed and moist, but he is in less pain than he was yesterday and the abdomen is less distended. Pulse 84; temperature 98°. The bowels were open last night.

16th.—Patient had a better night. The abdomen is less tense and he has only occasionally pain shooting across at the level of the umbilicus. The wound looks cleaner, but is still being poulticed. Opium is still being administered, and ice and milk and beef-tea are his only articles of diet. Pulse 80; temperature 99°. Bowels open.

18th.—Patient has had a good night's rest, and feels better. He is free from pain. Temperature at noon 99°.

20th.—His nights are now good, and in every respect he is improving. The tension of the abdomen is diminishing, and he scarcely complains of any pain. The wound is still being poulticed.

24th.—Temperature is normal. The bowels have lately been rather constipated, but were open yesterday and to-day. The abdomen has decreased much in size, and the wound looks better.

26th.—Patient is now taking fish diet, and is going on well. The scrotum is still somewhat hard and inflamed, and the wound discharges pus, but the temperature is normal and pulse steady.

September 1.—He is now nearly well, and the wound has almost healed, a little zinc ointment only being applied to it. Patient now gets up for a few hours daily. He still keeps on fish diet.

9th.—He has now obtained a well-fitting truss, which he wears, and during the last week has been on ordinary diet. Except that patient is emaciated and weak, he seems now to be quite well again.

ATROPHIC CANCER OF THE MAMMA.

(Under the care of Mr. ADAMS.)

Mary M., aged fifty years, a widow, was admitted on October 27, complaining only of pain and swelling of the left arm, which prevented her doing her work as a washerwoman. On examination there were found to be two or three small irregular ulcerated patches round about the left nipple, involving the skin only. The breast on the left side had entirely disappeared, the mammary region being there covered by a flat surface of red, hard, contracted skin, resembling the mark of a scar. The nipple was very large, hard, and prominent. The surface of skin involved was about as large as the palm of the hand, and its margins were marked by reddish nodules of advancing cancer. Hard minute cords could be traced running towards the axilla, where there were several enlarged glands. On the left arm, at the inner

aspect of the biceps, was a large, hard, irregular mass, which was considered to be due to phlebitis of the basilic or brachial vein, and to which was probably due the œdema of the hand and forearm. Patient was remarkably well as to her general health, and had never lost flesh at all. The pain in the parts she described as "lancing," but it was slight and only occasionally noticed. She had had seven children in all—the first when she was twenty-five years old, the last when she was forty-two. Fifteen years ago she had first observed a lump in the left breast, which she thought had followed an abscess; this lump gradually increased for some time, and was then followed by complete wasting of the breast. The ulceration commenced about a year ago, and had progressed very slowly. Patient remained in the hospital for about five days, nothing beyond constitutional treatment and the application of simple lotions being, of course, done.

ST. THOMAS'S HOSPITAL.

SARCOMATOUS TUMOUR AT BASE OF BRAIN.

(Under the care of Dr. BRISTOWE.)

[For the following notes we are indebted to Dr. W. B. Hadden, Medical Registrar.]

Alice G., aged thirty years, was admitted on October 25, 1878. It was stated that patient had been quite healthy until about three months before admission. About that time her sight began to fail, she became stupid, and at times seemed as if out of her mind. She was then pregnant, and about the middle of November her child was born. During the five weeks following her confinement patient lost flesh to a considerable extent and her other bad symptoms underwent no abatement.

When admitted, patient was pale and had a stupid expression of countenance. She was constantly talking in a rambling way, but when questioned answered rationally enough. She had delusions connected with her recent confinement, and when questioned about it stated that she had been delivered of a baby that morning (Oct. 25), and had put him out in the yard. There was severe occipital and slight frontal headache. She was quite blind, and the pupils were dilated, the right rather more than the left; both were very slow in reaction to light. The optic discs were of a greyish white, but the vessels were not much altered in size or appearance. There was slight facial paralysis on the left side and some loss of power in the left arm, but there was no anæsthesia in any part. The temperature was normal. On examination all the other organs and parts seemed to be healthy, and the urine was free from albumen. All the evacuations were passed involuntarily. Patient remained in the same condition, being always more or less drowsy and under delusions, until December 1, when she had a fit which lasted for a few seconds. In this fit the eyes were said to have been fixed and the head and limbs rigid.

December 11.—Patient appears to sleep a great deal. The evacuations are still passed involuntarily, and her delusions remain.

February 9.—There has been nothing of any interest recorded lately concerning patient. To-day she had an attack of unconsciousness which lasted about two minutes; there were neither spasms nor rigidity. The pupils were at first contracted, and afterwards became widely dilated.

March 28.—She has of late been less talkative than formerly; is very lethargic, and can scarcely be roused to take her food.

April 2.—She occasionally swallows a little food, but cannot be roused. She lies on her back, breathing stertorously. There is some loss of sensation in the conjunctivæ, and the left facial paralysis is very marked.

3rd.—To-day she seems to have regained consciousness, and to be aware of what is passing round about her.

4th.—Some râles are to be heard over both sides of the chest in front.

5th.—To-day the face and lips are dusky. She is conscious, but can hardly articulate, and moans occasionally and complains of pain. Her temperature this morning was 102·2°; in the evening it rose to 103·6°.

7th.—She cannot be got to answer questions, but appears to be conscious, and moans frequently. Her general aspect has not altered, and she appears to be sinking. Temperature, morning 102·2°, evening 104·4°.

8th.—Patient died to-day at 3.30 p.m. The temperature rose from 105·6° in the morning to 107° just before death.

Post-mortem Examination.—On removing the calvarium, there was found to be great injection of the pia mater, but no meningitis. A tumour about as large as a small orange was found on the under and anterior surface of the right temporo-sphenoidal lobe of the cerebrum, the substance of which had been partly absorbed, so that the right middle cerebral artery was exposed all along the course of the fissure of Sylvius. The surface of the tumour next the brain was soft and covered by pia mater. On the side next the base of the skull the tumour was closely adherent to the dura mater, and had caused partial absorption of the adjacent petrosal and sphenoid bones. The right optic nerve was flattened and soft, and the right crus cerebri seemed somewhat pressed upon. No other nerves apparently have been interfered with. On section, the tumour was granular in structure, purplish in colour, and evidently very vascular. Microscopically examined, it was found to consist of fusiform and round cells, with numerous concentric aggregation of cells in a bird's-nest-like arrangement. The growth was considered to be sarcomatous.

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SATURDAY, JANUARY 3, 1880.

THE NURSING AT GUY'S HOSPITAL.

Not long ago we considered, at some length, the very important subject of Hospital Government, noticing in a general way the merits and demerits of the different systems of government adopted in our metropolitan hospitals, and entering with some fulness into the respective advantages of government by committee, and government by a paid medical head, with, in large institutions, a lay head also. We did not comment directly on government by an autocratic lay head—by a "treasurer,"—the form of government which obtains at St. Bartholomew's, Guy's, and St. Thomas's, though we pointed out the dangers that must attend such a system, or any system of purely personal government. It may work very well, so long as the lay

autocrat has not only the necessary knowledge, industry, and business habits, but has also discretion, tact, and a considerate appreciation of the position, duties, and special responsibilities of the other officers of the institution. But should he be over-zealous and over-energetic, hasty and despotic in the remodelling of systems and in enforcing reforms, and over-persuaded of his own wisdom and judgment, he may work infinite mischief. We pointed out that any officer in such a position should remember that change is in itself, or may be easily made, an evil; that the law of custom is stronger than any command upon paper; and that it is easier far to destroy than to build up; and further, that before interfering with or attempting to remodel any part of the working of a hospital, he ought to take counsel with those who are especially interested in and know most about it. The present most unfortunate state of the nursing system at Guy's Hospital illustrates to perfection the evil that may be worked by a want of these governing virtues and a neglect of the precautions we spoke of.

Some months ago the Treasurer of that Hospital, Mr. Lushington, appointed a new Matron or Lady Superintendent, with a new, cut and dried "system of nursing"; and he did this without any consultation with the Medical Staff. This new system the Matron has insisted on carrying into practice at once, and fully, without any consideration for the old system or appreciation of its excellencies; and the result has been an entire disorganisation of the nursing in the institution. There has been an exodus of many of the oldest and most efficient sisters of the wards and of some of the most competent and perfectly trained nurses from the Hospital. So far as we can see, it would appear that the guiding principle in this lady's mind is that hospitals are made for the nurses, not nurses for the hospitals. Nurses have been shifted from surgical wards, where they had long worked, and had become thoroughly conversant with their duties and with the particular treatment and system of dressing of the surgeon, into medical wards, where they had to learn everything afresh; and those even who had been trained in special wards have been removed into general wards. And it is said that the Matron has ordered that patients who are not confined to bed all day shall get up and dress themselves at five o'clock in the morning. We need not point out how absolutely bad such changes must be for the patients. And numerous other changes, causing friction, discontent, and resignations, have been made.

We have not spoken of all this sooner, because we hoped that the disastrous effects produced, and the remonstrances of the Medical Staff, would lead to a satisfactory rearrangement before the matter became a public one. But we fear this hope is a vain one. All the House-Surgeons, House-Physicians, Resident Obstetric Officers, Full Dressers, and Clinical Assistants memorialised the Treasurer and Governors upon the subject, and were promptly snubbed; the Assistant Clerk to the Hospital curtly informing them, by order, that the Governors had entire confidence in the Treasurer, and would not interfere with the proceedings of the Matron.

The Medical Staff have also remonstrated with the Treasurer, but in vain. He was courteous, and, of course, only anxious to do what was best for the patients, etc. But he summoned a meeting of the Governors, at which—by virtue of his office, we suppose—he took the chair. The meeting was, it is said, a very small one; no representative of the Medical Staff was invited to attend; and a vote of confidence in the Treasurer was passed. Thus the real reply of the Treasurer to the remonstrances of the Staff has been, that the Governors have entire confidence in the Treasurer, and the Treasurer has entire confidence in the Matron—and in himself. In the interest of the Hospital and the patients things cannot be suffered to remain in this state of disorganisation and confusion. In the end we believe that the Medical Staff will be compelled to appeal to the general body of Governors; and by this means the matter will become one for public discussion.

HIP-JOINT DISEASE.

The Clinical Society of London has recently been engaged in a prolonged discussion on hip-joint disease. Assuredly few subjects of greater importance and interest could have been selected for discussion. Not only on account of its social aspects is it important, but from the surgical standpoint it is a subject that affords ample material for discussion, and ample room for improvement; and the debate upon it has afforded the profession an opportunity of hearing the most recent views of Mr. Holmes, Mr. Hulke, Mr. Wood, Mr. Lister, and Mr. Bryant, among others.

The debate was excited by a paper from Mr. Croft, who, at the meeting on November 28, 1879, read notes of a case of excision of both hip-joints for femoral necrosis. The case, and the discussion on it, will be found fully reported in our issue of December 13. This case was a brilliant success. We must, however, regard it in the light of what *can* be obtained rather than as a sample of what is the usual outcome of this operation. Incidentally Mr. Croft mentioned that out of forty-five patients operated upon there had been sixteen deaths from one cause or another; and it was this statement which gave rise to the discussion, as it was subsequently carried on, on the evening of December 12. The bare figures were no doubt somewhat startling, but when the causes of death were analysed, and presented to the Society at their last meeting (*vide* report in our issue of December 13), they assumed a totally different aspect.

Mr. Croft then explained how these deaths spread over a period of fourteen years; that nine of them died of tubercular disease of the viscera, which could not be attributed in any way to the operation, all of them having lived for some time after it—the period of survival varying from about three months to four years. These valuable statistics had only been obtained by most sedulously following up the cases through many years. With less diligence and care the patients might have been entered in the case-books as "cured" or "relieved," and more misleading statistics would thus have been added to the mass with which we are already overweighted. It were to be wished that other surgeons had followed up their cases with equal diligence—not only their operations, but the cases of hip disease entered in their books as cured or relieved. A few critical analyses like this of Mr. Croft's would supply us with information which is very much needed at the present time. There yet remain, however, six other fatal cases, death being due "directly or indirectly to the operation," viz., one to septicæmia, three to pyæmia, one to suppurative arthritis of the knee following on erysipelas, and one to thrombosis and asthenia. There was also one death from diphtheria of the air-passages. This is no doubt a formidable array, and it leaves room for much improvement, as Mr. Croft seemed to suggest when he stated that "five of these deaths occurred from preventable disease."

Thus the entire subject of hip disease—its pathology, its treatment, and ultimate issue—was opened up by this paper. We do not propose in this place to repeat what has already been fully given elsewhere; but it may be useful to briefly summarise the points raised, and the lessons which are deducible therefrom.

It was stated by several speakers that rest, with extension, and perhaps counter-irritation, together with change of air,

especially sea air, sufficed, or would suffice in a large proportion of cases, to effect a cure, provided they could be brought to bear on the case at a sufficiently early stage of the disease. On the other hand, some cases were referred to in which the disease baffled all efforts, and continued to progress notwithstanding the most careful hospital treatment. From this it must be evident that there are cases the tendency of which is to disorganisation, but it does not prove that there are not a large number of cases which might also be benefited by the treatment just alluded to. Unfortunately hip disease is common in that class of life where this plan of treatment *cannot possibly be carried out.* Doubtless one of the speakers was right in saying that the child of a labouring man cannot receive adequate treatment at home. And as surgeons are obliged to refuse admission to the majority of patients suffering from hip disease, it is quite clear that a large proportion of the cases are doomed to progress to that stage of the disease at which, by common consent, surgical help is no longer possible. There can be little doubt, too, from what was said during the discussion as to the frequency of caries as the pathological factor in hip disease, that the cases which resist treatment are probably cases of caries of the neck of the thigh-bone. Caries is a very obstinate disease in young children, and a very common complaint too. In the hip-joint it is doubly dangerous on account of the secondary troubles to which it may give rise. We mean the epiphysial necrosis, cases of which were brought forward by Mr. Parker at the suggestion of the President of the Society. They are interesting, it seems to us, as confirmatory of the caries view; and we should expect them to occur even more frequently than actually seems to be the case. Perhaps the carious epiphysis has not been looked for, or it may perhaps have become absorbed in greater part owing to the late stage at which the operation is often performed. Once exfoliated, these epiphyses become foreign bodies, and by their continued presence they serve to keep up the disease indefinitely. It is of importance, then, to clear up this question, and by a careful study of the cases to differentiate this class, for the sooner such a sequestrum is removed the better.

Some remarks were made on the methods of operating. It may certainly well be questioned whether the usual method of opening the joint from behind does not unnecessarily involve the cutting through of structures which are important to the limb; but it will require a much larger experience than we at present possess to induce us to accept a new operation such as is proposed. At present, all that can be said is that the generally unsatisfactory results of operative treatment justify any attempt to render the proceeding as little destructive as possible. As to the utility of using Lister's antiseptic precautions, we presume that there will not be a single dissentient voice. Carefully carried out, a hip-joint which is the seat of disease, with or without pus, can, with these precautions, be opened without fear of evil consequences, and the question of caries, or necrosis, or epiphysial sequestra can then be settled with a certainty which will otherwise be impossible.

The subject of articular surgery within the last few years has undergone a remarkable development, and we confidently look forward to the time when hip disease will cease to be such an opprobrium to surgery as it undoubtedly is at the present time. We have no wish to advocate cutting into every hip-joint which is said to be a little painful or swollen—indeed, we would especially protest against any such practice,—but we hope that a more rational plan of treating this troublesome affection will be inaugurated as an outcome of this important discussion.

If it serve only to point out the necessity for a more ample accommodation where the subjects of this disease can receive that rest and nursing which are said to effect an almost certain cure, it will have done much good; while if it brings about a more accurate knowledge of the right time to operate, and of the best method to adopt, it will prove of inestimable advantage to those who, having the disease, were not able to secure that attention in the early stage which, as has just been said, is so efficacious and yet so simple.

THE RELATIONSHIP OF BRIGHT'S DISEASE TO OTHER DISEASES.

PART I.—THE SECONDARY FORMS OF NEPHRITIS.

THE subject of Bright's disease is one which is far from being exhausted as yet, and many points in its history still require elucidation. Professor Bamberger, of Vienna, has therefore done good service(a) in utilising the vast resources of the Allgemeines Krankenhaus to try and clear up difficulties and open up new paths of investigation into the pathology of this disease. His essay is founded on his own long clinical experience, but also on 2430 post-mortem examinations in which the anatomical diagnosis of Bright's disease has been made in the Pathological Institute at Vienna during the last twelve years. The total number of patients of all kinds, excluding children, during this period was about 250,000, the total number of necropsies 19,000. The cases diagnosed as Bright's disease do not include amyloid disease, or nephritis due to circulatory obstruction (*Stauungs-Hyperämie*) or to embolism or pyæmia, unless accompanied with true parenchymatous or interstitial nephritis. On the other hand they include the nephritis which occurs in acute infectious diseases, and especially in typhoid and puerperal fevers, this form being classed under the head of acute Bright's disease. The Vienna pathological classification arranges cases of Bright's disease under three heads, the acute, the chronic, and the atrophic. Those cases in which the kidneys exhibit the anatomical appearances of inflammatory swelling are under this system reckoned as "acute," though clinically they may be chronic cases with acute exacerbation. By "chronic" is meant that form of nephritis in which the epithelial element is chiefly involved (parenchymatous, or tubal nephritis); by "atrophic," that which is known in England as interstitial nephritis, where the bulk of the organ becomes gradually reduced by connective tissue proliferation and contraction.

With regard to this classification, we should say that Professor Bamberger recognises no abrupt line of demarcation between the parenchymatous or tubular, and the interstitial or granular contracted forms of chronic nephritis. They shade insensibly into one another when a large number of cases of Bright's disease are examined post-mortem. There are marked examples of both forms, and endless intermediate forms between the two extremes. The same is true of the *clinical* history when a sufficient number of cases are observed. We get typical examples of chronic Bright's disease where the symptoms of the classical descriptions of tubular and interstitial nephritis are found associated, each with their proper morbid appearances. On the other hand, as Bamberger points out, there are three other contingencies. In the first place, cases diagnosed as interstitial nephritis during life turn out at the necropsy to be either cases of tubular (parenchymatous) nephritis, or combinations of the latter with interstitial changes or even with amyloid degeneration; or, secondly, the symptoms may be very nearly those of tubular nephritis and the kidneys be in a highly contracted state; or, thirdly, the symptoms may correspond partly (especially in the earlier stages) to those of

(a) "Ueber Morbus Brightii und seine Beziehungen zu anderen Krankheiten" (*Volkmann's Sammlung Klinischer Vorträge*, No. 173).

tubular and partly (especially in the later stages) to those of interstitial nephritis. Hence Bamberger's experience leads him to the belief "that the clinical aspect of Bright's disease depends less on the anatomical form of the kidney-mischief than on the acute or chronic character of the illness, and on the conditions which accompany and follow it —*e.g.*, renal hyperæmia and hæmorrhage and cardiac hypertrophy." We should remark, in passing, that among German pathologists the tendency appears to be less to discriminate a number of characteristic forms of Bright's kidney than to show how interstitial, tubular, and even amyloid changes may occur in varying proportions in all possible combinations with one another. Our space will not permit us here to do more than refer in proof of this statement to the recent admirable essay of Dr. Carl Weigert, of Leipsic,(b) which sums up the results of several years exclusive work at the pathology of Bright's disease. Weigert comes to the conclusion that interstitial and tubular changes are inseparable in the same kidney, that degeneration of renal epithelium is a prime factor in the production of interstitial connective tissue proliferation, and that our classification of the forms of Bright's disease must mainly be based on their *chronicity*. Hence his provisional arrangement of them is into four groups—acute, subchronic, chronic, and very chronic nephritis; the symptoms corresponding to each form depending on the predominance of tubular disease in the acute and subchronic forms, and on the gradual coming to the form of interstitial changes and granular contraction in the chronic and very chronic forms. We shall hope to speak more in detail of Dr. Weigert's essay at some other time.

To return to Professor Bamberger: he has utilised the material at his disposal for two main purposes—first, to study the relations of Bright's disease to other antecedent diseases; and secondly, to clear up the natural history of this affection when occurring as a primary disease in a previously healthy person, especially with reference to its complications and sequelæ. In this part of the subject he enters at considerable length into the discussion of the mode of origin of cardiac hypertrophy in chronic Bright's disease. It will be best to follow Professor Bamberger's plan, and treat first of the secondary forms of nephritis. Of these, 1623, or 67 per cent., were represented in his 2430 cases. Anatomically, the secondary and primary forms differ but slightly. Amyloid disease of the renal arterioles is, however, much more common in the former, while the alterations in the kidney generally are also usually less advanced in it than in the primary forms, because the latter are seldom fatal in the acute stage, and generally have undergone considerable development before they are met with on the post-mortem table. Clinically, the secondary forms of Bright's disease are characterised by the frequency with which the renal symptoms are overshadowed and obscured by those of the original disease, and by the rarity of cardiac hypertrophy (3·3 per cent. in the secondary, against 42·6 per cent. in the primary form), except in cases with concomitant valvular disease, endarteritis, aneurism, or emphysema. The following table represents numerically the etiological relationship of secondary Bright's disease to other diseases, and the proportion of acute, chronic, and atrophic (granular contracted) cases associated with each. The percentages refer to the total number of the cases investigated, both primary and secondary, viz., 2430:—

Primary Disease.	Bright's Disease. Acute form.	Chronic form.	Atrophic form.	Total.	Percentages.
Tuberculosis, phthisis, scrofula . . .	47	257	77	381	15·7
Valvular disease of heart . . .	19	117	86	222	9·1
Pregnancy and puerperal affections .	80	56	16	152	6·3
Diseases of urinary organs . . .	11	72	51	134	5·5
Suppurative processes	42	77	10	129	5·2
Alcoholism, cirrhosis of liver . . .	16	68	33	117	4·8
Cancer . . .	13	55	35	103	4·2
Emphysema of lungs .	6	51	28	84	3·5
Typhoid fever . .	42	14	2	58	2·4
Syphilis . . .	4	29	16	49	2·0
Scarlet fever . .	18	0	0	18	0·7
Intermittent fever .	1	9	3	13	0·5

A few cases not included in this table were the results of cholera, pneumonia, diphtheria, small-pox, scurvy, dysentery, etc.

What strikes us most in this table is the remarkable frequency with which Bright's disease and phthisical and scrofulous processes are associated. Bamberger believes that this point has never before been brought out with sufficient clearness by other observers. As far as English writers on phthisis are concerned, we have long been surprised at the way in which the subject of the connexion between phthisis and albuminuria has been passed over by them. We should probably be within the mark if we said that our authorities on renal disease, with one or two exceptions, have also been contented to consider amyloid degeneration as the only common form of renal disease which complicates phthisis. As a fact, Bamberger finds that while amyloid disease in the kidneys and in other organs is a tolerably frequent attendant on chronic phthisis, the parenchymatous or tubular form of nephritis is far the most common condition. True tuberculosis of the kidneys, and caseous inflammation of the mucous membrane of their pelves, are on the whole very seldom met with. Professor Bamberger considers that clinical experience can leave scarcely a doubt that the phthisis is really the antecedent of the nephritis, and not *vice versâ*; and he points out how rarely phthisis actually occurs in persons who are already the subjects of Bright's disease. Valvular diseases of the heart, which come next in the list, include all forms of these affections, one of the commonest in association with renal disease being simultaneous disease of the mitral and aortic valves. Bamberger regards venous stasis as at least one factor in the production of tubular and interstitial changes. The number of cases of chronic and atrophic Bright's disease, especially the latter, associated with the pregnant and puerperal state is interesting; and Bamberger is of opinion that in some of them the nephritis must have existed before pregnancy, for else the time would have been too short for the process to have reached the atrophic stage. We shall see in another article that *primary* Bright's disease is more common in women than is generally supposed; but we should also remember how rapidly interstitial alterations may follow tubular nephritis, as Aufrecht found in rabbits in which the ureter of one side was tied.(c) We need scarcely discuss here the relationship of Bright's disease to diseases of the pelvis of the kidneys, of the ureters, and of the bladder, for it has long attracted the attention of surgeons. Bamberger specially notices hydronephrosis and pyelitis and purulent nephritis as frequent complications in this section. The frequency of amyloid disease in connexion with chronic suppuration is also well known. The effect of chronic alcoholism in inducing Bright's disease seems clear from Bamberger's table, though some authorities have tried to deny it. It is chiefly the ulcerative and multiple forms of cancer which are associated with renal diseases

(b) "Die Bright'sche Nierenerkrankung vom pathologisch-anatomischen Standpunkte" (*Volkmann's Sammlung Klinischer Vorträge*, Nos. 162, 163).

(c) *Centralblatt Med. Wiss.*, Nos. 19, 35, 1878.

With regard to emphysema, Bamberger thinks that it is sometimes not the cause, but the result, of the Bright's disease, and arises in consequence of capillary bronchitis secondary to the latter. Sometimes the two affections may be merely collateral, and both dependent on the patient's age. The condition of the heart he considers the best guide to the determination of their causal relationship to each other. "If the emphysema is the primary disease, the right side of the heart is hypertrophied, the left normal. If the left side is also hypertrophied, the emphysema cannot be the primary disease, but either a sequela or a chance complication of the nephritis, and the nephritis is probably primary, seeing that secondary Bright's disease very rarely leads to cardiac hypertrophy." The other sections of the table need not detain us; we need only observe that Bright's disease as a sequela of scarlet fever is so sparingly represented in it because at Vienna, as a rule, children under twelve years—who, of course, are its chief victims—enter the St. Anne's Children's Hospital, instead of the General Hospital.

Turning now to the common factors which must exist in all the diseases that are found to give rise to Bright's disease, Professor Bamberger points out that they can be arranged in three groups, each of which is based on a distinct pathological element. In the first group, which is also the most important of the three, this element is of a poisonous nature. The kidneys are damaged by some chemical substance which passes through them as the great excretory organs of waste products, and which may either be introduced into the system from without, or be manufactured in the system itself. Of the former class alcohol is the chief representative; other bodies which irritate the kidneys, such as cantharides and squills, are known, but their effects are temporary, and it is uncertain whether their prolonged use in small doses would excite actual nephritis. Bamberger is sceptical as to the toxic action of lead, whereas it is admitted by Weigert in his essay. Would Bamberger deny that there is some causal relationship between lead-poisoning, gout, and granular contracted kidney? The poisons manufactured in the system itself are probably more important factors in the production of chronic Bright's disease than those external to it. They are the products "of self-infection, caused by the absorption of organic material destroyed by suppuration or gangrene, and of the lowly organised, rapidly proliferating bodies which cling closely to it." In this category we have scrofula, tuberculosis, and phthisis, caries and necrosis of the bones, suppurative inflammation of the joints, skin, and subcutaneous connective tissue, ulcerating cancer, typhoid ulcers of the bowel, etc. "More than a third of all the secondary forms of Bright's disease," says Bamberger, "may probably be referred to it."

The element in the second group is venous congestion due to heart or lung disease. It needs no detailed discussion. In the third, and the numerically smallest group, the exciting cause of nephritis is retention of secretion owing to mechanical obstruction, such as urethral stricture, pressure on the ureters, and the like. It is difficult to decide whether the stagnating secretion exerts a chemical as well as a mechanical action on the kidney. Bamberger inclines to the belief that it does both; and he also considers that in some cases of chronic Bright's disease a combination of two, or even of all three of the groups, may have been at work. Thus, in pregnancy, venous stasis and pressure on the ureters may both co-operate, and in puerperal inflammations the toxic element of the first group may be superadded.

In another article we shall offer our readers the results of Bamberger's investigation of the primary form of Bright's disease, which are no less instructive than those we have just been discussing.

THE WEEK.

TOPICS OF THE DAY.

It will be remembered that some months since considerable discussion was evoked in medical circles, consequent upon an announcement that the authorities of St. Thomas's Hospital had been considering the advisability of adapting a portion of their new building for the reception of paying patients. At that time the scheme was not regarded with general favour, more especially as the Home Hospitals Association had just been brought to the notice of the public, and it was felt that a large public institution, designed for the accommodation of the sick poor of the metropolis, was thus, as it were, entering into competition with a society which was endeavouring to meet the great want of public infirmaries for the middle classes. It is, therefore, with some feeling of surprise that we notice the report that the authorities of St. Thomas's have submitted to the Charity Commissioners a scheme for filling their vacant wards with paying patients. It is stated that the proposal is to have two different systems. The first is intended for those who are able and willing to pay, for the treatment of whom a separate part of the Hospital shall be set aside; they will have separate medical administration, and a special medical officer to superintend this portion of the establishment, who will be paid out of the funds supplied by the payments of the patients. Every patient admitted to these wards will have the option of engaging the services of his own medical attendant. The other arrangement is for the less wealthy, who are to be scattered promiscuously throughout the general wards of the Hospital, and who will be called upon for a scale of payment only sufficient to defray the cost of their maintenance. We have already given our views at length on this subject in general, and must wait for fuller information before judging of the new hybrid scheme for filling up with paying patients the wards of this Hospital built for the sick poor.

The Board of Health of the Canton of Zurich have just taken an important step with regard to the prevention of infectious diseases. They have issued an order that every case of such disease, however slight, is to be reported direct to them, and for this purpose they have furnished every medical man in the district with books provided with counterfoils. Sanitary commissions, instituted with this object, will be obliged to send instructions to the medical men when the cases are considered serious, and will prescribe the means of disinfection, the isolation of the sick, and other precautionary measures. The results of the information sent by the practitioners will be published every month under the direction of the Board of Health.

An attempt is at last to be made to provide the inhabitants of London with a long-talked-of luxury. A private Bill is to be presented to Parliament next session for the purpose of legalising a scheme for supplying the metropolis with sea-water. If it be carried through, every householder desirous of availing himself of this aid to health will have nothing to do but to turn on a tap to secure for himself a bath of genuine sea-water delivered straight from the English Channel. According to the views of the projectors this luxury need not be confined to the rich only; they calculate that for a payment of 30s. a year on a £50 rental a constant—not an intermittent—supply can be placed at the disposal of as many householders as may choose to subscribe to the undertaking. The Bill ought to have few, if any, opponents, and its passing will be a great sanitary triumph for those innumerable hard-working persons who have neither time nor money to avail themselves of even the nearest and cheapest health-resorts on our coasts.

A singular case of accidental death formed the subject of an inquiry held last week by Dr. Hardwicke in Marylebone parish. The deceased, a carman, was driving his van through Maddox-street, Regent-street, when the horse, through the slippery state of the roadway, stumbled, and deceased was thrown with some violence to the ground. He was picked up and placed in the van, but as he was only partially sensible he was taken to the Middlesex Hospital, where he was seen by one of the resident medical officers. After a time the man recovered his senses, and expressed a wish to go home. He did so, and the same afternoon he became insensible, death supervening in a few hours. Upon a post-mortem examination being made, it was found that two of the bones of the skull had separated at the sutures, from the violence of the fall. The medical evidence proved that the injury was of a very exceptional character, only two other cases being on record of the bones of the head separating at the sutures without any injury to the bones themselves being apparent. The jury returned a verdict of accidental death.

A Committee representing the Cardiff Corporation has recently effected the purchase of the Cardiff Waterworks for £300,000. This amount is to be raised in sums of not less than £500 at 4 per cent., and repayable in five, seven, ten years, and upwards. The shareholders received from their directors £200 per cent. on their shares, and the directors are going to Parliament to ascertain what is to be done with the large surplus, there being a dispute among the shareholders as to how it should be apportioned. Of the shareholders' capital £100,000 remains on mortgage. If the profits of the Cardiff Waterworks Company are not exceptional—and we have no reason to suppose they are,—the luckless ratepayers all over the kingdom may well look forward with impatience to the day when the sale of water shall no longer be a monopoly, and this prime necessity of life may be procured at a reasonable price.

Another large and seasonable distribution of funds to medical charities in this country has recently been announced by the executors of the late Miss Harriet Hurst. This lady died a few months ago, leaving a sum of nearly £70,000 to be divided at the discretion of her representatives, and amongst the institutions benefited we may mention the London Hospital, which has been awarded £5000; Middlesex Hospital, £3500; St. George's Hospital, £3000; University College Hospital, £3000; the Stamford and Rutland Hospital, £3000; the Westminster Hospital, £2000; the Cancer Hospital, Brompton, £1000; the Charing-cross Hospital, £1000; St. Mary's Hospital, Paddington, £1000; the Hertford General Infirmary, £1000; the National Hospital for the Paralysed and Epileptic, £1000; the Hospital for Sick Children, Great Ormond-street, £1000; the Brompton Hospital for Consumption and Diseases of the Chest, £1000; the City of London Truss Society, £1000. Amongst a large number of charities to which the sum of £500 has been allotted we find the names of the Huntingdon County Hospital, the St. Peter's Hospital for Stone, the Royal Medical Benevolent College, the Royal Free Hospital (Gray's-inn-road), the London Lock Hospital, the Lincoln Hospital, the Kent and Canterbury Hospital, the Royal London Ophthalmic Hospital, the Hospital for Women (Soho-square), the Evelina Hospital for Sick Children (Southwark-bridge-road), the Hitchin Infirmary, and the Metropolitan Convalescent Institution at Walton-on-Thames. The Samaritan Free Hospital for Women and Children, the National Ophthalmic Hospital, and the Charity Organisation Society receive £300 each.

A very sad tale of the death of a medical officer in India has reached us, but the particulars, as described, have not yet been officially confirmed. The gentleman in question, Dr. Dumbleton, formerly a student of St. Bartholomew's Hospital, who had only joined the Indian Medical Service in March last, was recently ordered to proceed to Peshawur, and from there proceeded in medical charge of a draft *en route* to join the Kurram Valley force. Being but an indifferent horseman, he was much galled by the long ride, and in addition he suffered from a severe attack of fever—so much so that on the detachment meeting the 13th Bengal Lancers, their medical officer assured Dr. Dumbleton of his utter unfitness to proceed. Dr. Dumbleton managed to reach Ali Kheyl, where his appearance was so distressing that the staff officer consented to make arrangements for some other surgeon to go on with the detachment. Dr. Dumbleton accordingly went off to his tent, threw himself down in his clothes, and fell asleep. Early next morning the officer in command of the detachment woke him up and informed him that no other medical officer had been appointed, that the troops could not march without a surgeon, and consequently that he must make an effort to proceed. Dr. Dumbleton explained his unfitness, and the officer left his tent, but he had only proceeded a few yards when the report of a pistol made him hurry back, to find the doctor dead with his revolver beside him: a too sensitive nature had given way under an accumulation of illness and worry.

There can be but one opinion as to the treatment to which Dr. Farr has been subjected, and we think that his dignified and temperate letter to Major Graham, the retiring Registrar-General, deserves to be known by all: "December 23.—Sir,—Having now heard from you that Sir Brydges Henniker is to be the new Registrar-General, and thus having lost all chance of being your successor, I shall be glad if the Lords of her Majesty's Treasury will allow me to resign my appointment, and will grant me superannuation allowance to the extent of my full pay. I have served under you nearly forty years, I have taken with you three censuses, and I feel confident that I can leave my case in your hands. —(Signed) William Farr." The Government doubtless has its reasons for passing over Dr. Farr cut and dry, but by ordinary people no valid reason can be found for passing over the claims of one who has earned a world-wide reputation in the discharge of his duties, in favour of a mere political partisan, possessing, so far as is known, not a single qualification fitting him for the important post of Registrar-General.

THE "GUY'S HOSPITAL GAZETTE."

Our contemporary, the *Guy's Hospital Gazette*, ventured in October last to admit some unfavourable comments upon the changes in the nursing system of the Hospital. Whereupon the Treasurer intimated to the Editors that no such comments or complaints could be permitted to appear in the journal in the future, and that articles must be submitted for his approval before publication. The Editors have very rightly decided that under these circumstances they will be unable any longer to continue the publication of the *Gazette* "in a way that would do justice to the subscribers and to themselves." The only remark we will make upon this despotic act of the Treasurer is, that it is a most telling reflection upon his own conduct, and a fatal confession of weakness. The Treasurer is evidently afraid of discussion or comment.

ANOTHER BREAK-UP OF A COMBINATION OF SANITARY AUTHORITIES.

We regret to have to record another example of what we must consider a shortsighted and retrograde policy in reference to the sanitary progress of the country. As our readers are aware, many local sanitary authorities having adjoining areas of jurisdiction are enabled, by forming voluntary

combinations, to secure as medical officer of health for each combined area an able and technically trained expert, when they could not, separately, be served by officers so well equipped for the prosecution of sanitary work. But we have recently observed with regret that paltry local jealousies or trifling money questions have been allowed to disturb these very useful and sensible combinations. The consequent secession of one or more of the combined bodies has had the disastrous result of compelling those specially trained experts to resign their appointments, and of leaving the sanitary work of these local areas, with its pittance of pay, to local general practitioners—in many cases already overburdened with other work, in most cases deficient in the aptitude and special acquirements necessary for sanitary investigation, and in every case hampered and impeded in that work by the mere fact that they must at the same time devote most of their energies to what may be their conflicting interests as local general practitioners. We are not aware what may have been the exact cause or causes that led to the breaking-up of the North Devon Combination of Sanitary Authorities; but the melancholy fact is that, on account of the secession of the Okehampton and the Torrington Authorities, Mr. Wynter Blyth has been obliged to tender his resignation as Medical Officer of Health to what remained of the Combination. It is satisfactory to learn that at the last meeting of the South Molton Authority the resignation of Mr. Blyth was the subject of regret, and a resolution was unanimously carried "to thank him heartily for his valuable services, rendered all the more efficient as well as acceptable from the pains he has always taken to explain to those who were to be affected by them the reasons for his recommendations."

SOCIETY OF MEDICAL OFFICERS OF HEALTH: ANNUAL REPORT.

The annual report of the Society of Medical Officers of Health for the year 1878-79 records the number of meetings held during that period. Many changes are noted as having taken place in the list of members of the Society during the past year: the Society is stated to consist of 166 members, including 37 metropolitan and 66 extra-metropolitan members, 23 retired medical officers of health, 22 associate and 18 honorary members. Mr. Liddle expressed his wish to retire from the office of treasurer, the duties of which he had performed to the advantage of the Society for a period of six years. A cordial vote of thanks was passed to him for his valuable services, and Dr. J. W. Tripe having consented to undertake the duties of the office, he was unanimously elected Mr. Liddle's successor. Dr. Thomas Stevenson, who has so efficiently presided over the Society during the last two years, intimated his desire not to be again nominated to that position, and has been ably succeeded by Dr. Bristowe. Dr. Corfield also expressed a wish to be relieved of the duties of joint secretary of the Society, which he had performed for the past five years. The report contains copies of the addresses delivered and papers read during the session, but as notices of several of these have from time to time appeared in these columns, it will not be necessary to do more here than mention the fact.

ERNEST CARR JACKSON, M.R.C.S. ENG.

We very much regret having to record the early death of Ernest Carr Jackson, the eldest son of the late well-remembered Thomas Carr Jackson. Ernest Jackson received his professional education (as his father had received his) at St. Thomas's Hospital; and visited the medical schools of Paris. In 1875 he became a Member of the Royal College of Surgeons, England, and a Licentiate of the London Royal College of Physicians, and afterwards was for some time Resident Surgeon to St. Mark's Hospital, London. His father's death, at the age of fifty-three, forced young Jackson at once into practice, and he obtained the appointments of Surgeon to the National Orthopædic Hospital, and of Medical Officer to the British Equitable Assurance Society; and soon showed himself to be a good and able surgeon. He was fond of his profession, possessed good abilities, was well educated and a hard worker; and his bright, cheerful, frank temperament won him friends everywhere,—so that a happy and prosperous career seemed assuredly before him. But he was ambitious of gaining the highest surgical qualification, and therefore, though not strong, struggled to combine hard study with the daily demands of practice. It was not long before the effects of the strain on his powers became apparent, in lowered health, restlessness, and sleeplessness; and then, like so many others, in order to obtain sleep he took to that most pernicious drug, chloral. This helped to weaken him still more by degrading nutrition, and he became highly anæmic; but he still fought on, till at last, on December 26, at the residence of his father-in-law, Dr. Barnes, he sank and died at the early age of twenty-six.

THE ST. ANDREWS HOSPITAL FOR MENTAL DISEASES, NORTHAMPTON.

In publishing the annual report of the St. Andrews Hospital for Mental Diseases, Northampton, for the year 1878, the Committee explain that, to prevent any confusion with the County Lunatic Asylum, it has been considered desirable to change its title to the one given above. As Mr. Joseph Bayley, the Medical Superintendent, sets forth in his annual statement, it was agreed, in consequence of various circumstances, that pauper patients originally admitted to this Hospital should be gradually removed to a new asylum provided by the county, and that the present institution should then be rearranged, to render it suitable for the requirements of an additional number of patients of the upper and middle classes, who were to be received at moderate rates of payment. In carrying out this arrangement the directors were following up a suggestion of the Commissioners in Lunacy, who, in their report for the year 1869, commented on the great want of asylums in this country, in which persons, not absolutely paupers, might be received at a moderate tariff. The St. Andrews Hospital is now the largest of the kind in England, and possesses an average annual income of close upon £30,000. The average number of patients resident during the year under notice has been 282, viz., 147 males and 135 females; the number of discharges includes 55 recovered, 21 relieved, and 8 not improved. The proportion per cent. of deaths to the total number resident during the year was 5·5. The death-rate for 1878 is the lowest on record since the opening of the Hospital, and the deaths have all been from natural causes. Although nearly four hundred patients have been under treatment during the year, many of them with strong homicidal and suicidal propensities, no accident of any kind has occurred either to patients or attendants. The report undoubtedly shows that a great public want has been met by converting this Hospital into an asylum for the reception of paying patients belonging to the middle classes.

PATHOLOGICAL SOCIETY OF DUBLIN.

At the recent meetings of this Society the following morbid specimens were shown:—On December 13, Dr. J. K. Barton presented a specimen of extensive disease of the right knee-joint in a girl aged fourteen. The cartilages were eroded, and there was remarkable caries of the head of the tibia. Hæmorrhage occurred from arteries of a small calibre after amputation, and the patient sank. The mitral valve was puckered, and the right side of the heart was filled with pale blood-clot. Mr. Stokes exhibited a tumour which he

had removed from the lower jaw of a woman aged fifty-seven. It was of thirty-four years' growth, but within the last six months had grown quickly. The tumour was referred to the Committee of Reference for a report on its nature. The President (Dr. E. H. Bennett) submitted the trachea and lungs of a child aged two years, on whom tracheotomy for croup had been performed. Rapidly extending pneumonia of the left side had commenced before operation, and speedily proved fatal. The operation was laryngo-tracheotomy, as proposed by Boyer. The advantages of it are that no damage is done to the larynx, and the voice is not imperilled. Dr. Ball presented an immense tumour which engaged the left side of the face of a man aged thirty-seven. The growth apparently originated in the lower jaw, and was in part a round-celled sarcoma with cells of very small size, in part a spindle-celled sarcoma. There was no glandular enlargement. Dr. Finny showed the viscera of a married woman, aged thirty-seven, who suffered from diabetes mellitus, attributed to mental anxiety. Eight to twelve pints of urine were passed daily, and on one occasion ten ounces and three quarters of sugar were excreted in twenty-four hours. The middle lobe of the right lung was indurated, and there were cavities along the anterior edge of the same lung. Rapid catarrhal pneumonia ending in caseation and ulcerative destructive disease had occurred. There was simple fatty degeneration of the kidneys. The liver was congested, but of normal size. The pancreas was not examined. There was nothing abnormal in the condition of the brain, nor was there any macroscopic change in its fourth ventricle. On December 20, Mr. Stokes showed an example of a dentigerous cystic tumour or membranous cystic growth from the inferior maxilla of a lad aged fifteen. The growth probably owed its origin to the irritation of a carious tooth. The tumour was lined internally by a thick leathery membrane, from which a honey-like fluid was secreted. Excision was performed, and the patient recovered without any deformity. Dr. W. G. Smith exhibited a specimen of intussusception of the ileum into the colon in a man aged thirty-three. An obscurely cylindrical swelling was found in the left iliac fossa. Nearly four months elapsed between the first appearance of symptoms and the patient's death. The intussusception could not be disentangled after death. The diagnosis was based on the history of the case, the tumour in the left iliac fossa, the results of a rectal examination, and the character of the motions, which consisted of mucus and blood.

THE HEALTH OF THE WANDSWORTH DISTRICT.

The annual report for the year 1878 on the sanitary condition of the Wandsworth District, which comprises the parishes of East and West Battersea, Clapham, Wandsworth, Putney, and Streatham, shows that the death-rate for the year was considerably in excess of that for 1877. This is, however, accounted for by the fact that the mortality in the district during 1877 was exceptionally low, while the increase is entirely due to the greater fatality from measles, whooping-cough, diarrhœa, and lung diseases, and was confined wholly to the extremes of life, especially the period of infancy. The report again refers, as in some former years, to the fallacy of calculating the increase of population, between the times of taking the census, on the plan employed by the Registrar-General, and it submits that a method of calculating the population by the number of births occurring in a district during the year would give a more reliable result. Thus, the population of the Wandsworth district, gauged by the latter method, would be nearly 190,000, while, according to the Registrar-General's mode of estimating it, it is 164,812. The importance of this discrepancy is shown by the fact that officially the death-rate for the district has to be returned as 19·8 per 1000, whilst, according to the estimate of the medical officers of health, it was only 17·2 per 1000. The report shows that the number of uncertified deaths continues to rise: in all fifty persons died and were buried in this district during the year 1878, and nobody was able to say with certainty what they died of; no medical man was in attendance, and the coroner thought it unnecessary to hold an inquiry over any one of them. This is not satisfactory, and should certainly be looked to. The medical officers, whose names are appended to the report, are Messrs. W. H. Kempter and Joseph Oakman, East and West Battersea; Mr. J. MacDonogh, Clapham; Dr. G. Nicholas, Wandsworth; Dr. Sutton, Streatham; and Dr. Walker, Putney.

ASSOCIATION OF SURGEONS PRACTISING DENTAL SURGERY.

The annual general meeting of this Association for the election of the officers and Council for the ensuing year, and for transacting the usual business, will be held on Wednesday, January 28, at 4.30 p.m. The following is a list of the names of Fellows recommended by the Council to be appointed to the offices named below:—*President:* *W. A. N. Cattlin, Esq. *Vice-Presidents:* J. A. Baker, Esq., Samuel Cartwright, Esq., Alfred Coleman, Esq., John Smith, M.D., F.R.S., *S. J. A. Salter, M.B., F.R.S. *Treasurer*: T. Edgelow, Esq. *Hon. Secretary:* J. Hamilton Craigie, Esq. *Council:* *Edward Bartlett, Esq., S. Hamilton Cartwright, Esq., J. Fairbank, Esq., Francis Fox, Esq., W. Donald Napier, Esq., George Parkinson, Esq., W. G. Ranger, Esq., *Augustus Winterbottom, Esq. (An asterisk is prefixed to the names of those not holding the same office the preceding year.) The Fellows of the Society and their friends will dine together in the evening, at seven o'clock, at the Langham Hotel, under the presidency of Samuel Cartwright, Esq.

DUBLIN SANITARY ASSOCIATION.

The annual general meeting of this voluntary Association took place on Wednesday, December 17, in the Leinster Hall, Molesworth-street, Dublin. Mr. Jonathan Pim, the President, took the chair. From the report, which was read by Dr. J. W. Moore, acting Honorary Secretary, it appeared that the Association now numbers 258 members, being a decrease of six as compared with the previous year. The income for the eighteen months ending November 30, 1879, amounts to £250 10s. 9d.; the expenditure has been £242 6s.; leaving a balance to the credit of the Association of £8 4s. 9d. The report then dealt with the various topics of interest presented during the past eighteen months in the working of the Association, especially with the recent Royal Sanitary Commission, which the Association was mainly instrumental in obtaining at the hands of the Government. The Executive Committee has suffered serious losses through the resignation of three most valued members—Dr. Grimshaw, on his appointment as Registrar-General for Ireland; Surgeon-General Crawford, on leaving Dublin for India; and Mr. R. O'B. Furlong, barrister-at-law, on being appointed Secretary to the Royal Sanitary Commission. The adoption of the report was moved by Dr. Head, President of the College of Physicians, seconded by Mr. Frederic W. Pim. The election of officers for the ensuing year was moved by Mr. Maurice Brooks, M.P., seconded by Mr. William Findlater. Other resolutions were supported by Mr. Chas. H. Meldon, M.P., Dr. James Little, Mr. George R. Rice, barrister-at-law, Dr. J. W. Moore, and Mr. La Touche.

THE INFLUENCE OF DIFFERENT POSITIONS OF THE BODY ON ITS TEMPERATURE.

This subject has been lately studied by Dr. Sassezky (*Petersburger Med. Woch.*, No. 20, 1879). His method of

experimenting consisted in placing the patient on his back, first with the arms folded on the trunk, and then with the same extended, the temperature being simultaneously measured in the ear, mouth, axilla, rectum, fists, and between the first and second toes. The pulse and respirations were noted at the same time. In other experiments the legs were raised instead of the arms, the patient lying on his back as before. The general conclusion arrived at was that elevation of the extremities, and especially of the legs, raises the temperature of the whole body, *except that of the part elevated*, some fraction of a degree, or even one or more degrees, centigrade. The effect is much more marked in sick people than in the healthy. The pulse and respirations are accelerated in both by raising the limbs. The greatest rise of temperature is observed in the axilla and rectum. The effect of posture is most decidedly seen in typhoid patients, especially where the fever has been severe and the nutrition of the heart is much impaired. Patients with true heart disease come next; then those with phthisis. The explanation of these facts seems a simple one. The flow of warm blood to the elevated limb is diminished, and that to the other parts of the body increased; and the weaker the condition of the heart, the more decided do the differences of temperature between the two regions become.

FROM ABROAD.

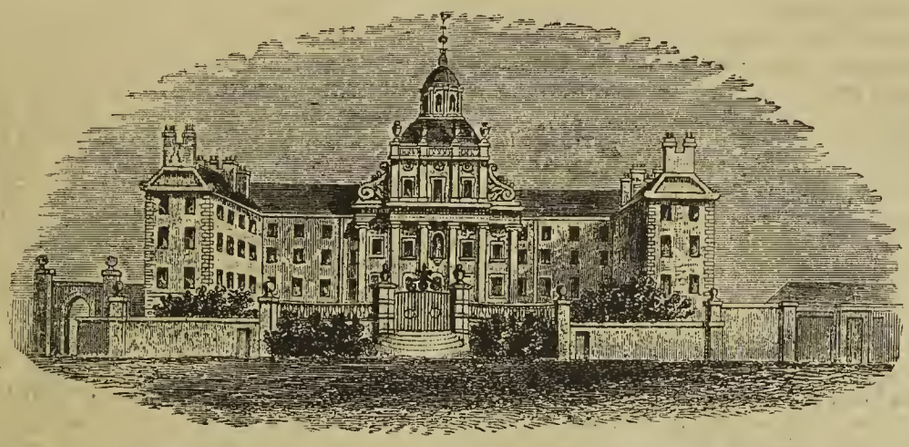
Professor Wood on Unilateral Chorea after Amputation.

The subject of a clinical lecture delivered by Prof. Wood at the Philadelphia University Hospital (*Philadelphia Medical Times*, November 3) was an intemperate tailor, seventy-four years of age, who, ten or twelve years since, underwent amputation at about four inches below the knee on account of a senile gangrene of the left foot. A good stump resulted, which has never been painful or tender; and his general health has always been good. About five or six years after the amputation he felt movements in the stump, and some months later they commenced in the left arm. At the present time the stump is flexed at right angles to the thigh, and a clonic spasm of the flexors occurs a little oftener than one hundred times in a minute, drawing the end of the stump towards the thigh over an arc of from two to four inches. Rarely there is a spasm of the extensors, bringing the leg beyond the right angle, but never straight. There is no tenderness whatever over the stump nor along the popliteal or sciatic nerves. Occasionally there are choreic spasms of the glutæi and other muscles moving the thigh. In the forearm the movements occur from eighty to ninety times in a minute. Much of the time the flexors of the fingers are especially affected, while at other times the adductors and the abductors jerk the hand to and fro. The muscles of the upper arm are every now and then affected, throwing the hand violently about, these movements at times being rapidly repeated. The muscles of the shoulder are rarely affected, as are sometimes the lateral muscles of the trunk. Occasionally, also, the muscles of the left side of the face suffer from decided clonic spasms, while at other times there are only some tremulous movements of the upper lip and the angle of the mouth, which is slightly drawn upwards, as though from habitual spasm. There are very slight choreic twitchings of the muscles of the neck. The right side of the body is entirely free from abnormal movements. The man sleeps with his arm elevated and placed under his head, evidently for the purpose of holding his arm; and when it is held when awake all movements cease in it, those of the stump becoming worse. When the stump is restrained it remains quiet and the movements of the arm become worse; and when both are held the movements of the muscles of the thigh become very strong. The faradaic current of considerable intensity, applied over motor points of the thigh and popliteal nerve, fails to develope any tenderness or to exert any influence upon the spasm. During sleep the arm is often quiet, even when not restrained; but the stump is always twitching, although the movements are very slight during sound sleep.

It is evident that this man is suffering from one of the forms of what is called chorea of the stump. This, judging from the scantiness of the literature of the subject, must be a very rare affection, although painful or neuralgic stumps are but too common. In some cases the parts of limbs left after amputation are affected by peculiar local painful spasms of one or more muscles, and not unfrequently these cramp-like contractions co-exist with neuralgia of the stump. In the majority, if not all, of such cases the difficulty is a local disease of the nerve-fibres, and often there are distinct bulbous neuromatous enlargements at the ends of the several nerves. Very generally, under these circumstances, distinct tenderness exists in the end of the stump, and often it can be traced along the course of the nerves. The bond of common etiology and pathology between such cases and a painless chorea does not seem a very close one; and the complete absence of pain in this man's case widely separates him "from the patient in whose life-chart every north-east storm is marked by a day of intense suffering."

Although it would not seem that any conclusion as to the nature of the lesion in this case can be drawn from our knowledge of neuralgic stumps, yet it is of importance to determine whether such lesion be peripheric or centric. It may be that there is a peripheral lesion which acts as a permanent irritation, and maintains such a permanent influence on the nerve-centres as continually to provoke discharges of motor nervous energy. That such an explanation is possible is seen in cicatricial epilepsy. "I have seen a bodily state, in which six to twenty convulsions occurred daily, removed almost at once by the cutting out of a seemingly unimportant and certainly insensitive cicatrix." But we may also inquire whether an amputation may in any way cause centric nervous disease. Vulpian and Dickinson proved, some years since, that after amputation a creeping structural change occurs in the nerve, which at last reaches and travels along the spinal cord. This has been confirmed by Hayem and others. The lesion is on the side of the injury, and consists in lessening of the grey matter of the anterior horn with atrophy of the multipolar cells, and changes in the white matter resembling those of chronic myelitis. But in this case a centric spinal lesion would not be sufficient to account for the symptoms. The whole motor apparatus of one side of the body is involved, and the lesion would have to extend into the medulla. Further clinical and experimental evidence seems to prove that choreic movements are never spinal. Then, again, there is no heightening of the reflex activity, the movements being distinctly not reflex—handling, tapping, tickling, the galvanic current, all forms of peripheral irritation, failing to magnify them.

"Any centric lesion causing the movements must be cerebral, and without doubt in the cortical substance. I believe, up to the present time no one has traced structural nerve-changes, following amputation, beyond the cord into the brain. It would seem to me certain that in ordinary cases the nervous lesions do not go above the spinal cord. This does not prove that the lesions never ascend higher. The present is an extraordinary case. Two or three days ago a gentleman died, whom some years since I saw suffering from indubitable locomotor ataxy. A year or two later, symptoms of chronic cortical cerebritis, such as is seen in general paralysis of the insane, came on, and progressed to death. This is not the first case of the kind reported, and I believe that the microscope will show an ascending of chronic inflammation from the cord to the cerebral cortex. Again, Charcot and his pupils have abundantly proven that lesions of the cortex travel downwards. Whilst, therefore, we have no proof that the atrophic changes of the spinal cord following amputation ever reach the cortex cerebri, it is not at all unlikely that they sometimes do so. When we come to set one thing against another, we can only conclude that there is at present no proof, or disproof either, of the peripheric or centric origin of the choreic movements; either theory is commensurate with the now known facts. Dr. Weir Mitchell inclines to the peripheric theory, 'because the fits sometimes occur too soon after amputation.' It is not certain that he clearly distinguishes between painless and painful cases, and he says he never saw a case arise very soon after amputation. I can find no case like the present reported in which the pain was developed under several months. In this man five years were required. How fast a lesion under exceptional circumstances might travel, we do not know."



REMINISCENCES OF THE OLD ROYAL INFIRMARY OF EDINBURGH.

BY AN OLD CONTRIBUTOR.

WITHIN the last few weeks the New Royal Infirmary has been publicly opened, and the good work so long carried on in the time-honoured and far-famed Edinburgh Infirmary has been transferred to the new and magnificent premises. The public interest in the institution has been shown not merely by good wishes for its future prosperity, but by practical beneficence—the free-will offerings for the purpose of having it thoroughly furnished and equipped for the work to be done.

Fully sympathising with this well-placed enthusiasm and in the glowing anticipations of increased usefulness, it may yet be permitted to one who has long and kindly remembrances of the "Old House" to look back and linger a little as he says good-bye to it. The "Old Royal Infirmary of Edinburgh," so well known to the medical profession everywhere by reputation, so lovingly esteemed by all who had studied there, and not less by those who had themselves been recipients of its benefits. What memories are associated with its early days—memories of Monro, Cullen, Gregory, John Bell, and a host of others! How soon it became known as a great clinical school, and attracted men from all parts of the world to study in Edinburgh! We have no intention, however, of giving anything like a history of the Infirmary; we leave that for abler hands. All we profess to do is to give our personal recollections of the Old Infirmary as we first knew it, and of the extensions and changes which have taken place from that time until now, when it is left uninhabited except by the memories of the past.

Our earliest recollections of the Infirmary date from a period when we passed it daily in going to the Old High School. Then we viewed it with a certain awe due to the mythic legends current in the School as to deeds done within its walls; and we, moreover, somehow connected it with Dr. Barclay's Museum—"a chamber of horrors," in which, from the playground, we saw, or imagined we saw, skeletons hanging from the roof.

A few years passed, and we found ourselves a neophyte in the mysteries of medicine and a pupil of the Royal Infirmary of Edinburgh, then limited to the original Infirmary, or that part of the building which is now—or, at least, was till the last few weeks—known as "The Medical House." The Hospital of our student days (say, somewhere about 1829-30) consisted of a long central block and two shorter lateral blocks or wings. When viewed apart from its present surroundings and the irregular mass of buildings with which it has gradually become connected, the original Infirmary must have been—indeed, is still—a very fine building, in the Scoto-French style of the eighteenth century. The centre of the middle block presents a very handsome façade, surmounted by a dome and lantern dome; and in an alcove in the façade is a full-length statue of George II. The grounds are enclosed behind by the city wall, and in front by a lower wall, in the centre of which is a very fine ornamental gateway, approached by a flight of broad steps. We say an "ornamental gateway," because, being approached by steps, it is obvious that carriages could never have been intended to enter, and even the most majestic of "Provosts" might have felt small had the massive portals swung back to admit him. We believe it never has been opened in the memory of the "oldest inhabitant." The carriage entrance, ever since we remember (we are not the "oldest inhabitant"), was through a wooden gateway to the west of the ornamental one. The entrance for pedestrians, with which we are best acquainted, was by a small door still further west. By that narrow way we made our first entrance, and by it we will take our readers along with us into the Royal Infirmary.

As we open the door, we find ourselves confronted by a sort of den—by courtesy, the porter's lodge—in which is seated a burly official decked in the costume of beadledom, a large cocked hat, and blue greatcoat with red collar. His proper name was Phillips, but better known to students of that time as Cerberus, or St. Peter, according as their tendencies were mythological or theological. On our entrance he rises, not to do us honour, but to demand our ticket; and having been shown that, he allows us to pass. He had a keen eye for strangers, and was a terror to evildoers—that is to say, to any "Humanity"(a) who, in his character of student, wishing to see an operation, tried to pass as a "Medical": the eye of "St. Peter" marked him, and he was ignominiously rejected from the sacred gate. But we have entered. We pass along the pavement in front of the west wing of the building till we come to the side entrance leading to the staircase of that wing, and on the ground floor is the general waiting-room. Disregarding the patients for the present, we pass on through the room to what was the public bath-room of the Hospital, not used by the patients but by the citizens, for it was the only public bath in the city until very shortly before the period we are speaking of. The memory of Royal patronage still clings to it, for here, in 1822, "the First Gentleman of Europe" (George IV.) performed his ablutions. The room is somewhat octagon in form, with a high groined and ornamented roof; the floor paved with squares of marble, and the bath also marble. Dusty and deserted now, it still preserves the characters of

(a) Student of University Latin Class, "Literæ Humaniores."

former grandeur. The episode of the "regal bathing" in the Infirmary stimulated the citizens to get up public baths to supply a felt deficiency. These flourished for a time, but have now nearly ceased to exist, simply because scarcely any private house lacks that useful luxury.

Having now satisfied curiosity and performed the "Kotou" to Royalty, we proceed into the Hospital by the main entrance. We find ourselves in a large square hall, well proportioned and handsome as a whole, though not so lofty or so well lighted as to accord with modern taste. The roof is supported by pillars. At the back of the hall, opposite the entrance, is a recess or alcove, in which stands a bust of Provost Drummond, to whose exertions the original Infirmary owed its existence. A stove for heating and ventilation occupied the middle of the hall. To the west of the alcove is a small office for the head porter; to the east is the opening of the main staircase; and from either side of the hall there is a long and rather narrow passage leading to the administrative offices and store-rooms. The walls of the great hall are painted in panels, within which the benefactors of the institution are appropriately emblazoned in letters of gold. As we look on these records of goodwill and charity from the earliest days of the Hospital until the present time, there is much to make us linger, much suggestive of thought and sympathy. There are names well known to history, donations from kings and queens, many noble names amongst them: John Duke of Argyle and Greenwich, the patriotic statesman of George II.'s time; and in 1748 (three years after Culloden) the less loved name of William Duke of Cumberland; in a later panel David Hume and Commissary Smollett. Then there are receipts from assemblies and fancy balls for the benefit of the Infirmary at various dates, some of which must have been held in the old Assembly Close, and others more recent in George-street. And there are some subscriptions which speak to us of that large charity and loving spirit, unfettered by local interests, which is ever ready for good works anywhere. Such is the subscription from the Society of Friends, composed of subscriptions from almost every county in England and many parts of Ireland and Scotland—each place credited with the sum subscribed, and the whole summed up in business-like fashion into a grand total. Others, such as subscriptions and legacies from the West India Islands (then the "El Dorado" of Scottish youth), show the strong love of country and kindly memories of a home left long years ago, when they were poor Scotch lads forced to leave it to fight the hard battle of life.

But we must linger no longer. As we passed through the hall lately we observed the names and donations on the panels being copied, so we hope it is intended to perpetuate these records of past beneficence in the New Infirmary.

As we ascend the main staircase we observe large windows placed at different points, by which, together with the current of air from the entrance hall, ventilation is maintained, and by opening these windows fully the staircase can be thoroughly flushed with fresh air when necessary. On reaching the first-floor landing we find ourselves in front of the board-room door. The board-room occupies the whole length of the middle portion of the great central block. At each end of this landing are the entrance doors of the long wards. We see the large space which intervenes between the ward entrances, and we may notice that this space is being constantly ventilated by the current of air passing up from the entrance hall and staircase, so that practically there is no direct communication between the wards. Let us now enter one of these wards, say the west or male ward, known to Infirmary pupils as "No. 1 Medical." We find ourselves in a long ward having windows on both sides and an open fireplace at each end, its general character being that of a ward of the modern pavilion system. The roof is low in proportion to the length of the ward; the windows numerous, but small, and, being set deep in the thick walls, the light is somewhat defective; the double row of light pillars which support the roof also interfere with the spaciousness of the ward. Even yet, however, these are not bad wards, and when new and clean must, in the early days of the Hospital, have been looked upon as exceedingly fine. A door at the further end of the ward opens on the landing of the side staircase, and opposite, but at some distance, is the entrance of the ward of the corresponding wing of the Hospital. Here again we notice how the current of air passing up fills the interspace between the ward entrances, making a sanitary break between the two.

We have thought it well to give this general description of the Hospital, to show that in its construction the sanitary arrangements for natural ventilation by doors, windows, and fireplaces, and the position of the different staircases as air-shafts in relation to the wards, must have been carefully considered by those who projected it according to their lights.

The surgical department appropriately occupied the highest position, for it was at the top of the house—the male wards on the west, the female wards on the east; whilst the great operating theatre occupied the central part of the building, under the dome which formed its roof, admitting light from all sides, whilst large windows on the north side gave steady light in that direction. The theatre had two entrances—one on a level with the wards, the other higher up, reached by a narrow stair. The general appearance of the theatre was steep, well-like, and sombre, owing to the dark colour of the wood and walls. The area was rather compressed. Compared with the magnificent theatre subsequently built, when the old High School received the surgical department, the original theatre looked small and dingy. It was not so dark, however, as it looked, for the light was well arranged as regarded the operating table. It was the scene of great operative exploits, and associated with great names in surgery. We recollect, as if it were only yesterday, the first operation we saw performed there. It was out of "canonical hours." We were seated in Mr. Liston's class-room, waiting for lecture, when he entered and told us he had been summoned to an urgent case at the Infirmary, adding that as there would likely be an operation the class had better be off to see it. His advice was promptly followed. There were very few present except Mr. Liston's class and some of the hospital residents and dressers. The operation was amputation of the thigh for spreading gangrene in a man whose leg had been crushed by being caught in a warp. The operator was the late Dr. John Campbell. Liston assisted him, compressing the femoral artery. There was little time lost in preliminaries—for there were no anæsthetics in those days,—and the limb was soon off, the vessels tied, and the stump very lightly dressed, and the patient, who made but little exhibition of suffering, was removed, and we retired after seeing our "first operation." After that we saw many brilliant operations performed in that old theatre by Liston himself, with a dexterity and skill we have never seen equalled.

(*To be continued*)

Obstetrical Society.—The next meeting of the Obstetrical Society will be held, not on the first, but on the second Wednesday in January (14th).

The First Inebriate Asylum in Germany.—Dr. Pelman gives in the *Deutsche Med. Woch.* for December 6 an account of the first asylum for dipsomaniacs which has been recently established in Germany in imitation of the American asylums. In the year 1851 a Deacon-brotherhood establishment was opened at Duisburg, in the little town of Lintorf, near Düsseldorf, for the reception of discharged prisoners and ruined men. It was not originated especially for drunkards, but the numbers of these have gradually increased, and of 440 men who in the course of time have found refuge there, 301 have been received on account of a mania for drink. They remain there upon an average at least a year, leading a well-ordered, laborious life, the payments being only from 150 to 450 shillings a year. Although only intended for the lower classes, many who have been received there have seen better days and have moved in the higher circles. At the meeting of the German Lunatic Asylum physicians at Hamburg this year it was determined to attach to this establishment at Lintorf a spacious and handsome establishment for the reception of drunkards in a higher position in society, in which every appliance for their comfort and improvement should be supplied. This has accordingly been done, and the payment has been fixed at 150 shillings per month for the first class, and 100 per month for the second class of patients. The only defect, Dr. Pelman observes, is that there is no compulsory power for retaining patients a sufficient time for their cure, instead of imitating the "practical English," who have provided that when a patient has once consented to enter an establishment he cannot leave it of his own accord. He does not seem to be aware that the "practical English" have not as yet had any experience of the working of this provision.

REVIEWS.

The Principles and Practice of Surgery: being a Treatise on Surgical Diseases and Injuries. By Hayes Agnew, M.D., LL.D., Professor of Surgery in the Medical Department of the University of Pennsylvania. In two volumes. Vol. I. Chap. xx.; pp. 1062; 897 illustrations. Philadelphia: J. B. Lippincott and Co. 1878.

The present volume is the first part of a work on the Principles and Practice of Surgery. Professor Agnew had no need to seek to justify himself for undertaking this laborious task by stating that for a quarter of a century he has been unceasingly occupied with the study of anatomy and surgery, and actively engaged as a public instructor "to thousands of young men from all parts of the United States, and to many from foreign countries." What he has already accomplished justifies itself, and its author; for, so far as we can as yet judge of it, the book bears full and searching criticism, and will not be compared unfavourably with the best surgical text-books, whilst it cannot fail to extend Professor Agnew's reputation not only on his own, but on our side of the Atlantic also.

There is an excellent introductory chapter on Surgical Diagnosis, full of valuable hints and good advice to students, and well worthy of the attentive perusal of young surgeons. Chapter I. is on Inflammation, that "double-edged sword, cutting either way, for good or for evil, the friend of the surgeon, or his deadliest enemy." It shows a very wide knowledge of the literature of the whole subject, and of the history of hospital mortification more especially. The definition of inflammation as a form of *hypernutrition*, concise though it be, is confusing, being based on a term which itself requires explanation. The minute anatomy of the inflammatory processes is well illustrated and sufficiently fully described. Nerve agency is fully recognised, but the theory of active dilatation of vessels is rejected as being incapable of an anatomical explanation. "The yellow elastic layer tends to keep the vessels open, as does also the blood. The muscular fibres antagonise these, and strive to close them, and it is only when this opposing agency is removed by weakness or paralysis that their canals can enlarge." The treatment of inflammation is well given. Some of the views advanced are now generally dubbed antiquated, *e.g.*, tartar emetic is often prescribed, and mercury is placed "among our most valuable resources"; no remedy is thought to so thoroughly arrest the phenomena of inflammation or so certainly remove its products "as this much abused agent." Local and general blood-letting are regarded favourably in acute inflammation. "In the early stages of inflammation we possess no means more influential in arresting the progress of the disease" than local depletion. General blood-letting "is a potent remedy, and must be used with the greatest judgment. Though unquestionably greatly abused, . . . yet there is reason to believe that physicians and surgeons of the present day sometimes err in the other extreme, intimidated by popular clamour." We wish we had space for the whole of the author's wise remarks on this subject. Those to be found on page 77 are worthy of careful consideration. In injuries of large joints, and where suppuration, unless quickly controlled, will result in the loss of life or limb, Professor Agnew does not hesitate, following our countryman Maunder, to cut off the supply of blood by ligating the main artery of the limb. Counter-irritants should be used so as to produce simply a rubefacient effect; when carried beyond this they prove prejudicial. Setons, issues, moxas, and the hot iron are spoken of as "old heroic remedies," "rude weapons of torture," gone out of fashion, and it is to be hoped to "rest in peace." Yet for chronic inflammation these self-same weapons of torture are described as "capable of doing great good, and will by-and-by be better appreciated." Figs 41 and 42 are illustrations of two such instruments, which the author, in spite of himself, we must suppose, has brought to light—the result of "lingering about the mausoleums of ancient medicine." The author takes a rapid review of what he calls "pyogenic literature"; he thinks "there can scarcely be a doubt that pus is derived from two sources, viz., the white blood-corpuscles and the corpuscles of connective tissue." As regards the absorption of pus we are told it may take place in three ways—(1) Many of the corpuscles may re-enter the vessels; (2) others may become stable connective-tissue corpuscles; and (3) the serum may enter the vessels, leaving the corpuscles behind as a cheesy pulp to be removed by the vessels, or to be converted into a cretaceous mass.

The germ theory of suppuration is neither accepted nor rejected, but the author does not believe that all the symptoms which follow the opening of a chronic abscess are due to the admission of septic matter. The varieties of mortification are stated to be the *acute* and the *chronic*, and, it is added, between these two cases will be found in which the phenomena of both are present. We do not think the description of these two forms of the disease quite clear; it seems to us that it is contradictory in places and confusing throughout. When prefaced with a statement of the causes of gangrene, and of the frequency with which inflammation complicates all kinds of cases, there is no classification superior to that of *moist* and *dry or senile* gangrene.

On the subject of hospital gangrene Professor Agnew writes with the authority of one who has seen much of it. He considers the existence of a wound a necessary condition to its development. He never saw an idiopathic case, though he has seen the disease prevail in the endemic and the sporadic forms, and he thinks it is both contagious and infectious.

Chapter II., on Wounds, is indeed "profusely" illustrated, and when one figure (127) simply shows how to cut strips of strapping, and another (128) how to remove strapping from the arm, one feels disposed to say "too profusely." Some of the illustrations are but imperfectly explained, *e.g.*, Fig. 71. Some idea of the contents of this chapter may be formed from the following:—"The indications in the treatment of wounds are the arrest of hæmorrhage, the removal of foreign bodies, the proper apposition of the divided parts, and the use of such measures as will co-operate with nature to the fullest extent in the repair of the damage." For the arrest of hæmorrhage torsion is not admitted to possess any superiority over the ligature except in small vessels, and secondary hæmorrhage and the loss of life are said to have followed this method. Further on, secondary hæmorrhage is said to be at least as frequent after torsion as after the ligature. We regret the author has not supported such important statements on so important a subject with an account of the facts upon which they are based; more especially as the experience as regards torsion in this country is that it has been so free of accidents. The arguments usually employed against the thread ligature are considered to be "not proven"; acupressure is greatly objected to; whereas the animal ligature, especially the catgut, as now prepared by adding chromic acid to the carbolic acid and sweet oil, is said to have "the strongest claims to professional support." Two methods of transfusion are illustrated and described, but no allusion is made to Roussel's handy instrument.

On the after-treatment of wounds are the following remarks:—"The antiseptic method of Professor Lister, I am convinced, after a trial of one year, possesses advantages over all others. While I have not obtained results so extraordinary as those claimed by this eminent surgeon, the success has been so much more satisfactory than that obtained by the ordinary plans, that to decline the use of antiseptic dressing would be, in my judgment, to withhold from a patient the benefit of one of the most important resources of the art. By this plan the suppuration is greatly lessened, the union hastened, the risk of constitutional infection diminished, and the surroundings of the patient rendered less prejudicial to health." Professor Agnew's observations on healing by immediate union will startle believers in that process. To his mind it is simply impossible; and he believes that no wound, however slight, ever heals except through an inflammatory product, which may be very small in quantity and very quietly at work, but is necessarily present for the union of divided parts; and further on he emphasises the following statement:—"Nature follows but one method in the repair of wounds, and that is through granulation tissue, alike present whether the wound be small or great, open or subcutaneous."

Nearly twenty pages are devoted to gunshot injuries, a branch of surgery which American surgeons have had large opportunities of studying. We find no reference to the use of flexible probes in the examination of deep and circuitous sinuses.

Chapter III. deals with the Injuries of the Head, Face, and Neck. The objections to sutures in scalp wounds are deemed groundless; local applications in erysipelas of doubtful value. Neuralgia and epilepsy are said to be not uncommon sequences of scalp-wounds, and the excision of the scar is recommended —a case permanently cured in this way being quoted,—whilst further on (page 305) trephining for some cases of such affections is advised. Suppuration between the inner table of the skull and the dura mater is not always indicated by Pott's puffy tumour, nor does the tumour always indicate internal abscess, but when the tumour is present, and trephining employed, the incision should be made through it to the bone. Fracture by *contre-coup* is described as a term to be abolished. In cases of scalp-wound with a question of fracture, scraping away the periosteum and pouring in a coloured fluid such as ink to stain the crevice, if such exists, "should never be employed unless there is an urgent necessity for so doing." We hardly know which most to wonder at, the idea of such a procceding, or the half-hearted condemnation of it! Trephining is not recommended in fracture with depression, or with depression and comminution, in the absence of all symptoms of compression. In fracture with depression and signs of compression in adults, the sooner the operation is done the better, but in the case of children it is best not to proceed too precipitately. In compound fractures with depression, whether accompanied by symptoms of compression or not, the use of the trephine or elevator is proper. Punctured wounds of the vault also require the trephine as a preventive measure. Altogether eight conditions are enumerated which call for trephining. The treatment of salivary fistulæ is more fully described than usual in text-books. The division of the three branches of the fifth nerve is extolled in the treatment of neuralgia when constitutional remedies have failed.

Chapter IV. is devoted to Wounds of the Chest and Abdomen. To check hæmorrhage from a wounded intercostal artery—a very fatal injury, generally due to gunshot, and always associated with comminuted rib—the fragments of bone should be removed, and the vessel if possible tied; or the rib may be encircled with a ligature passed by means of a needle devised by the author (Fig. 224), or the vessel may be compressed by the author's intercostal artery compressor (Fig. 225).

Professor Agnew, in our opinion, attaches too little importance to the exclusion of air from the pleural cavity in thoracentesis: he says nothing about the occasional accident of sudden death during its performance; and the plan of operating which he describes is not, we think, the best. Gunshot wounds of the bladder are said to be less mortal than others of this viscus. The statement that when life is prolonged beyond four or five days the rent is through the non-peritoneal area, is a little too sweeping; while the advice to make a free incision through the perineum and neck of the bladder in all cases of extra-peritoneal rupture, is not quite good practice or scientific teaching. What value would such an incision have over the mere retention of a catheter when the rupture is in the front wall near the fundus? Nothing is said about aspirating, draining, or washing out the peritoneal cavity after intra-peritoneal rupture.

The War of the Rebellion has furnished Professor Agnew with abundant material to introduce into these chapters on wounds of the great cavities.

Chapter V., on Wounds of the Extremities, is very short. The only thing requiring special notice is the statement that wounds of the palmar arch or of its branches form no exception to the general law to tie both ends of the divided vessel through the opening made by the vulnerating body.

In Chapter VI., on the Diseases of the Abdomen, we find gastrotomy spoken of as an unjustifiable procedure, but as the author refers to no case later than Maury's, published in 1870, it seems doubtful whether he has made this statement with or without the knowledge of Verneuil's and other recent successful cases. Laparotomy and enterotomy for intussusception and internal strangulation are recommended in certain cases, though offering but gloomy prospect; and colotomy is of course advised in obstructions of the large bowel, though in malignant stricture of the rectum it is to be only an extreme resort, while for non-malignant strictures the treatment is said to be dilatation and incision, and we find no mention of colotomy under any circumstances. This is not giving to colotomy the place it deserves, not only as a means of relief in even the less extreme stages of cancer, but as a means of cure in syphilitic strictures. Professor Agnew errs on the right side when he says the colon will be formed exactly in a line *one inch* posterior to the middle of the crest of the ilium, and that the surgeon should work backwards under the quadratus lumborum muscle. It is better to cut the edge of the muscle. We are glad to find him objecting to the distension of the rectum as a means of finding the bowel. The introduction of the hand into the rectum, as practised by Simon and others, is condemned as a rash and revolting practice. The objections to Amussat's method of reaching the colon in children with imperforate anus are considered well founded, and Littré's method is deemed preferable. Excision of the rectum for epithelial cancer of the anus is thought quite as promising as excision of the lip for cancer. The author thinks unfavourably of all the varieties of radical cure for hernia, and doubts if the surgeon is justified in employing either. He never opens the sac in operating for strangulated hernia unless absolutely compelled. Listerism does not seem to have led him as yet to the opinion that the peritoneal cavity can be opened without risk. "A conical compress laid over the navel," is unadvisedly, as we think, recommended for congenital umbilical hernia.

Chapter VII. treats of the Diseases and Injuries of the Bloodvessels, and Chapter VIII. of the Ligation of Arterics. It is here that one realises the force of the arguments which are used against an increase of text-books on surgery. We read through page after page, and find next to nothing which differs from what we have read in any one of half a dozen similar works, while many of the illustrations seem to have haunted us from our surgical cradles upwards. Not that we mean to say that these chapters are badly done; on the contrary, good sound anatomical knowledge is everywhere evinced.

We find that the views we have ourselves long entertained against the utility of operations for the cure of varix are here boldly declared. The author says, "I do not believe that any operation which has yet been devised for the radical cure of varices is entitled to professional confidence." Tufnell's plan of treating aneurism is strongly advocated, not only as a means of cure, but as an aid to compression. Manipulation "merits unqualified condemnation"; galvano-puncture is attended with uncertain and by no means permanently good results; whilst the introduction of coagulating substances into the sac ought "to be banished from surgical practice," and the introduction of solid substances, such as iron wire or horsehair, offers no promise of any satisfactory results; indeed, the language employed on page 579 in reference to the last method is stronger than we care here to reproduce. Intra-cranial and intra-orbital aneurisms receive full attention.

We commend Chapter IX. strongly to the notice of dressers, house-surgeons, and teachers of bandaging and the application of surgical apparatus. It is abundantly illustrated, and the illustrations, many of which are not at all generally known, are well explained.

The tenth and last chapter (by far the longest in the volume) deals with "Injuries and Diseases of the Osseous System." It is evidently a favourite subject with the author, and his manner of handling it is one of the most striking features in the book. A large number of tables comprising 685 cases of ununited fractures not only illustrate every variety of treatment for the cure of non-union, but also give many interesting details in connexion with the whole subject of "pseudarthrosis." The information herein condensed is so great, and of such great importance to surgeons, that we welcome its publication in any form and in any surgical work, and therefore will not cavil at the impropriety of introducing such tables into a text-book for students. We notice that Professor Agnew does not hesitate to say that a fracture of the thigh-bone cured with one-half or three-quarters of an inch shortening is a good cure, and allows of no room for complaint. Ten pages are devoted to fracture of the patella—all kinds of treatment are described; Malgaigne's hooks are condemned; and too close a union of the fragments is regarded as a disadvantage on account of the great tendency to re-fracture. Impressed with such a view, it would be interesting to know what the author thinks of the heroic method lately practised of opening the joint to wire the fragments together. Diseases of bone are, in comparison with fractures, very briefly dealt with, occupying only 37 out of 324 pages. Necrosis without suppuration is barely mentioned; and osteitis deformans,

lately brought prominently before the profession in this country, is quite omitted. There are doubtless other omissions which would be detected by another eye or by our own on re-perusing the pages of this volume; there are, too, several typographical errors which will be certainly corrected in another edition; but, on the whole, we have nothing but praise for a work which not only expresses its author's own views in an unequivocal manner, but which also evinces wide practical experience, combined with a very extensive knowledge of the literature of his profession. We shall look with much interest for the second volume.

A Manual of Family Medicine for India. By W. J. Moore, L.R.C.P.E., M.R.C.S., Deputy Surgeon-General H.M. Indian Medical Service. Published under the authority of the Government of India. Third Edition. London: J. and A. Churchill. Calcutta: Thacker, Spink, and Co. Pp. 714.

Goodeve's Hints for the Management and Medical Treatment of Children in India. Seventh Edition, re-written by Edward A. Birch, M.D., F.R.C.S., etc., Surgeon-Major, Bengal Establishment. Calcutta: Thacker, Spink, and Co. London: W. Thacker and Co. Pp. 426.

New editions of these two well-known works have recently appeared. They are both intended to supply in some measure the medical wants of our numerous countrymen in India who may be either far from professional help in emergencies of sickness or of accident, or destitute of medical advice regarding the proper management of their own health, and especially that of their children, in the trying climate of Hindostan. Although we are, as a rule, very much opposed to popular medical instruction, believing that the result is most frequently a minimum of serviceable knowledge along with a vast preponderance of what is but partial, misleading, and dangerous, yet the peculiar circumstances of many of our countrymen in India, together with the special and insidious dangers of its varying climate, fully justify the publication of a few trustworthy popular works to warn the unwary new-comer before it be too late of the dangers he has to encounter, and to give judicious counsel to solitary individuals and families who cannot enjoy the advantages of personal professional advice. Moreover, the two works before us are in themselves probably about the best examples of medical works written for non-professional readers. The style of each is simple, and as free as possible from technical expressions. The modes of treatment recommended are generally those most likely to yield good results in the hands of laymen; and throughout each volume the important fact is kept constantly before the mind of the reader, that the volume he is using is but a poor substitute for personal professional advice, for which it must be discarded whenever there is the opportunity. Written with such objects and in such a spirit these volumes cannot fail to be of the greatest service, and that they are appreciated is shown by the rapid appearance of successive editions, the second mentioned and older treatise having now reached the seventh edition. We would add that although they are specially written for lay readers, there are few young medical officers proceeding to India who would not receive several useful hints from these unpretentious volumes. But it is to parents or to the guardians of European children in India that they must be of pre-eminent service.

The Manual of Family Medicine was originally written in 1872, in competition for a prize offered by the Government of India for a treatise suited to the medical wants of non-professional persons in India. Deputy Surgeon-General Moore's compilation received that prize, and was forthwith printed for circulation by the authority of the Indian Government. A second edition was soon called for, in which the chief alteration was that the drugs and remedies suggested for use were restricted to those most readily procurable and least likely to do harm in the hands of laymen. The work has now reached the third edition, and has again received a careful revisal.

The first edition of the treatise by Dr. Goodeve appeared at a much earlier date. It has now reached the seventh edition, and has been almost entirely re-written in accordance with the most recent medical experience by Dr. Edward A. Birch, Surgeon-Major, Bengal Establishment. The volume treats of everything that concerns the whole management and medical treatment of European children in India, explaining when they ought to be sent home to Europe, as well as how they may best avoid the evil influences of climate during their stay in India. Altogether the volume is a most complete one on the limited subject which it handles.

The Student's Guide to the Practice of Midwifery. By D. Lloyd Roberts, M.D., F.R.C.P. Lond., Physician to St. Mary's Hospital, Manchester, etc., etc. Second Edition. London: J. and A. Churchill. 1879. Pp. 346.

We have only to add to what we stated in noticing this book on its first appearance, that the second edition has not only been thoroughly revised, but considerably enlarged, and its value thereby increased.

GENERAL CORRESPONDENCE.

DISTINCTION BETWEEN TYPHUS AND TYPHOID FEVERS.

Letter from Dr. A. P. Stewart.

[To the Editor of the Medical Times and Gazette.]

Sir,—Having shown in my last letter that Dr. Perry did not recognise in *dothinenteritis* a specific exanthematous fever, and that the views held and taught by him were in other respects quite at variance with those set forth by me in 1840, and now generally accepted as true, I should not have considered it necessary to say a single word in reply to his son's letter in your issue of December 27 had he not spoken of "what Dr. Stewart claims now as his discovery." I now claim only what has been for thirty-nine years allowed, and is now for the first time disputed—that I was the first on this side the Atlantic who made out and made clear the distinction between typhus and typhoid fevers.

I am, &c., A. P. Stewart.

Grosvenor-street, W., December 30, 1879.

COLOUR-BLINDNESS.

Letter from Dr. B. Joy Jeffries.

[To the Editor of the Medical Times and Gazette.]

Sir,—In your number 1526 you make editorial mention of the Parliamentary paper of August 5, 1879, in relation to examinations of masters and mates for colour-blindness.

In noticing the small percentage found you do not take into account the method of testing, which was by asking the candidates the names of the colour of pieces of glass and cardboard. I have dwelt, in my volume sent you last summer, on this point. On page 115 of my book I quote from Professor Helmholtz's "Physiological Optics," page 299, 1867, thus: "As to the examination of the colour-blind, simply asking them to name this or that colour will naturally elicit but very little, since they are then forced to apply the system of names adapted to normal perception to their own perception, for which it is not adapted. It is not only not adapted, because it contains too many names, but, in the series of spectral colours, we designate differences of tone as such, which to the colour-blind are only variations of saturation or luminosity. It is more than doubtful whether what they call yellow and blue correspond to our yellow and blue."

In the portion of Professor Holmgren's book which I give in my volume the uselessness of asking colour-names to detect colour-blindness is most admirably put. His very simple and sure method of testing, advocated by me, and now carried out by me in over 24,000 examinations, is already adopted in the United States Army, Navy, and Marine Hospital Service.

I am, &c.,

B. Joy Jeffries, M.D.

15, Chestnut-street, Beacon-hill, Boston, Mass., U.S.,

December 12, 1879.

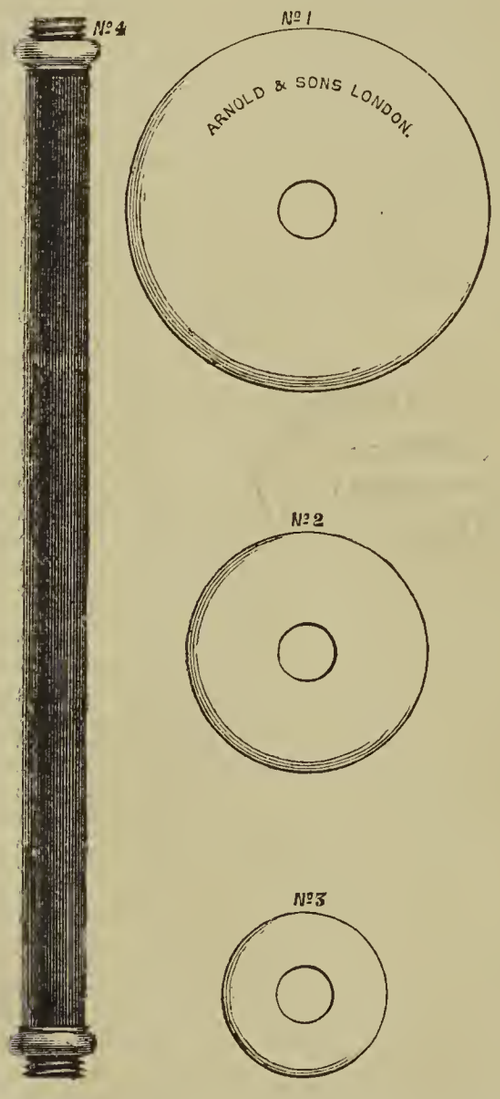
THE MEDICAL OFFICER'S STETHOSCOPE.

Letter from Dr. H. Veale.

[To the Editor of the Medical Times and Gazette.]

Sir,—A great authority on auscultation has remarked that a new stethoscope requires to be tried on as carefully as a new hat. The reason for this is clear. Some men hear best with a concave ear-piece, others prefer a flat or slightly convex one, but all seem agreed that the ear-piece, whatever may be

its form, is the most important part of a stethoscope. Still the shape and size of the chest-end are not without importance, for although medical men generally use the same instrument for all cases, pulmonary as well as cardiac, and for all patients, whether lean or stout, it is nevertheless a fact that chest-ends of different sizes may be desirable for the limitation of certain cardiac murmurs, and for the accurate localisation of pulmonary sounds. It would be inconvenient, however, to carry two stethoscopes about with us. Even one stethoscope of the usual form is an awkward instrument to carry, and many are the devices that have been adopted to overcome the difficulty. In my early days the stethoscope used frequently to be carried crosswise inside the hat; and many Edinburgh graduates of five-and-twenty years ago will remember the circumstance of a medical student having been accused of being armed with a life-preserver, owing to his stethoscope having rolled out when his hat was knocked off in a snowballing encounter! A perfect stethoscope should have the following qualities:—It should be portable under all circumstances; it should be a good conductor of sound; its ear-piece should be of a shape to fit any ear; its chest-end should be capable of being adapted to any



surface; and it should be suitable for any case. The instrument which I have devised will, I believe, meet nearly all these requirements. It consists of four parts—viz., a stem, an ear-piece, and two chest-pieces. The stem is a wooden cylinder six inches and a half long, having a uniform diameter of half an inch, with a short entering screw at each end. The ear-piece, of boxwood, ivory, or ebony, is slightly convex on one side and slightly concave on the other, rather less than the eighth of an inch thick, and about two inches in diameter, with a receiving screw in the centre. No. 1 chest-piece exactly resembles the ear-piece, except in having a diameter of only one inch and a half; No. 2 chest-piece is exactly like No. 1, except that it has a diameter of only one inch. The screws of the ear-piece and chest-pieces are all alike, and are made to fit either end of the stem. They are also reversible, so that the surface applied to the ear or to the chest may be either concave or convex, as required. Either chest-piece may be used, according to the nature of the case. For cardiac cases and for very emaciated patients I use the small ones; but for pulmonary sounds in persons ordinarily well nourished I prefer the larger chest-piece. When the stethoscope is not required for use, the ear- and chest-pieces can be unscrewed and carried in the waistcoat pocket, occupying about the same space as a crown, a half-crown, and a shilling; whilst the stem can be carried as easily as a pencil-case. Thus, by substituting a couple of nearly flat chest-pieces for the ordinary trumpet-shaped extremity, an elegant and universally applicable instrument is obtained, which even military medical officers, whose pockets have been reduced to the vanishing point, will be able to find room for. Country doctors also, to whom the ordinary stethoscope is a burden when riding, whether carried in the hat or pocket, would find this instrument particularly useful.

Stethoscopes of this description are now made by Messrs. Arnold and Sons, of West Smithfield, E.C., to whom I am indebted for much intelligent aid in executing my design.

I am, &c., H. Veale, M.D.

Royal Victoria Hospital, Netley.

REPORTS OF SOCIETIES.

THE PATHOLOGICAL SOCIETY.

Tuesday, December 16, 1879.

Jonathan Hutchinson, F.R.C.S., President, in the Chair.

Extra-Pericardial Aneurism with Hæmorrhage into Pericardium without any Free Communication between the Sacs.

Dr. Wm. Ewart exhibited this specimen, taken from a painter, aged thirty-three, who had been the subject of chronic Bright's disease (contracted kidney). He had had rheumatic fever in September, 1878, and later suffered from cough and pericardial pain, and still later, marked dyspnœa with œdema of the face and upper limbs supervened. There had been no signs or suspicions of aneurism during the patient's stay in hospital, but a double bruit was heard over the cardiac region. Post-mortem there was found a large aneurism in front of the first part of the aorta, which had pressed the lungs backward. It communicated with the aorta by an opening only one-sixth of an inch in diameter, and was lined with a thin fibrinous deposit, and contained much soft, loose clot. The pericardium was distended with a large amount of fluid blood and dark, soft clot. On careful examination no free communication between the aneurism or aorta and the pericardial sac could be discovered. Dr. Ewart suggested that the blood had found its way into the pericardium by mere filtration through the walls of the aneurismal sac on account of the very high blood-tension in the latter towards the close of life, double pleural effusion increasing the pressure around the aneurism.

Dr. N. Moore asked if there were any traces of recent pericarditis. He had just examined a case where, with pericarditis, secondary to kidney disease, there was a considerable amount of blood effused into the pericardium.

Dr. Ewart said there was no trace of recent pericarditis in his case.

Atelectasis of Lungs with Emphysematous Cyst.

Dr. Barlow exhibited the lungs of an infant, aged three months. During life it had been observed that the heart beat to the right of the sternum, and cardiac displacement from atelectasis of the right lung was diagnosed. There had been slight cough, with no dyspnœa or wheezing. Post-mortem, the heart was found to the right of the middle line, the right lung and the lower lobe of the left being atelectatic. The greater part of the left chest was occupied by a very emphysematous upper lobe of the left lung, connected with which there was a cyst as large as a Spanish chesnut, having a smooth lining not communicating with bronchi, and apparently just an exceedingly large emphysematous bulla. The apex of the heart was bifid, the conus arteriosus large, and the ductus arteriosus patent. The cyst was the interesting feature of the specimen. Such a condition was very rare; the speaker had not seen any record of such a cyst in the case of an adult. It had

evidently resulted from the coalescence of emphysematous alveoli.

Rupture of the Roots of the Brachial Plexus.

The President exhibited a young man suffering from extreme motor and sensory paralysis of the right upper limb, with the exception of the scapular muscles and upper half of the pectoral. Motor and sensory paralysis was complete below the elbow. The pupil of the right eye was more sluggish than its fellow, and could not dilate beyond a certain point; and the right eyeball was also somewhat retracted into the orbit, the palpebral fissure being smaller than on the left side. The diagnosis, therefore, in accordance with the suddenness of onset, the marked degree, and the persistence, of the paralysis, was that there was complete rupture of the four lowermost roots of the brachial flexus, the ocular phenomena pointing to implication of the cervical sympathetic. The right hand was cold, livid, and somewhat swollen, and the pulse in the affected limb was almost imperceptible—a condition probably secondary to the paralysis. Eight or nine months ago the man had fallen thirty feet from ship-rigging flat on the deck. He was at first stunned, and on recovery found his arm in exactly the same paralysed condition it had retained and now exhibited. There was no evidence that the limb had been wrenched during the fall. Six weeks afterwards a surgeon saw the limb, and was said "to *have put it back into its place*"; but there was only this very doubtful evidence of dislocation, which could not have produced paralysis so persistent. The speaker also exhibited a photograph of another man, who, after a similar fall, had presented almost identical paralytic symptoms; and he remarked that several cases of paralysis due to lesions of the brachial plexus had been recorded. He had, however, found an account of only one necropsy of such a case—that of a Frenchman, where complete paralysis ensued upon the forcible reduction of a dislocated shoulder, and where, post-mortem, the four lower roots of the brachial plexus were found torn across. The upper root always seems to escape laceration; probably its fibres are less exposed to stretching in such accidents.

Dr. N. Moore referred to a case of paralysis due to pressure on nerves. The patient had at first exhibited paralysis of the left hand, then of the whole left arm, and later of the other arm also. He then became paraplegic and died from the implication of the respiratory muscles. Post-mortem, a cancerous growth, not noticeable during life, was found in the glands on both sides of the neck, involving the brachial plexus, and extending into the spinal cord.

Mr. Godlee, after examining the President's patient, said it appeared to him that some of the fibres of the posterior cord of the plexus had escaped injury, for sensation was present in the region supplied by the circumflex nerve, and neither the deltoid nor serratus appeared to be completely paralysed. He thought, too, that the ocular symptoms did not necessarily imply complete rupture of the roots of the plexus.

The President pointed out that the ocular paralysis was incomplete, the main nerve-supply coming from a part lower down than the supposed seat of the lesion.

Rupture of the Heart.

Dr. Peacock exhibited this specimen, sent by Mr. T. Fisher, South Africa. The patient, an athletic man, twenty-five years of age, and a powerful wrestler, had received a blow in the epigastrium in a drunken brawl. He fell to the ground insensible, was kicked after falling, and died in a few minutes. He was found to have sustained a contused wound in the right temporal region, with rupture of the eyeball and fracture of the skull. The immediate cause of death was rupture of the wall of the right ventricle of the heart. The rent was three inches and a half long, and much loose blood-clot was found in the pericardium. The cardiac walls showed in places advanced fatty degeneration. The speaker mentioned that he had exhibited at one of the early meetings of the Society a heart showing rupture of the interventricular septum. In the case now exhibited, the rupture had probably been the result of the blow on the epigastrium. There was no kidney disease.

Ainhum—a South American Disease.

Mr. Hulke exhibited two specimens illustrative of this disease, sent by Dr. Da Silva Lima, of Bahia, who had first described the condition. The specimens consisted of the outer portion of the two feet of a tall, corpulent African negro, aged eighty, who died of heart disease. Mr. Hulke said that an account of the disease, from specimens sent also by Dr. Da Silva Lima, would be found in the eighteenth and nineteenth volumes of the Society's *Transactions*. The affected little toe, at first large and bulbous, is marked off from the foot by a sulcus which gradually deepens and encircles the toe; the phalanx undergoes atrophy, and the toe finally drops off unless previously amputated. The patient from whom the present specimens were taken had suffered from ainhum in both little toes for many years. The right little toe had been amputated when about to fall off, and the left one was attached by only a thin pedicle. Dr. Da Silva Lima, in a note, says this was the only specimen he had obtained showing the toe still united to the foot. He also states that at Bahia and Rio Janeiro there have been a few cases where ainhum has attacked the fourth toe, but it had never been seen in the three first toes or fingers.

The President said the special thanks of the Society were due to Dr. Da Silva Lima for having sent these specimens.

Mr. Hulke, in reply to Dr. Powell, said that the nature of the disease, so far as was made out in the microscopic examination by Mr. Wood and Mr. De Morgan, recorded in the nineteenth volume of the Society's *Transactions*, was an atrophy of the soft tissues and bones, due to a dense growth of fibrous tissue.

Two Cases of a Peculiar Skin Disease.

The President exhibted two young boys, both presenting a peculiar skin disease, quite similar in the two cases, and different from anything the exhibitor had previously seen. The two patients had been under observation for two years, showing hardly any change during that period. They presented groups of wart-like patches, seen, on close examination, to consist of congeries of minute cysts which have a marked tendency to become ecchymosed. The contents of the cysts generally were albuminous and corpuscular. In one case a patch occurred on the chin, and a portion of this patch had been excised and examined microscopically by Dr. Sangster. In that case the disease had existed for five years, and had not improved by treatment. In the other case, of three years' duration, a group of the patches was found on the shoulder, which locality suggested irritation from the boy's brace. The appearances might be due to dilated lymph-vessels, and he would suggest tentatively the term "lymph-warts" as descriptive of the disease. He remarked that Dr. Tilbury Fox last year brought forward a case where a vesicular eruption, supposed to be lymphatic in origin, was present on the thigh; but in that case it was associated with a nævus. He (the President) had then referred to the two cases now exhibited.

Dr. Sangster then read his histological report on Dr. Hutchinson's case of Vesicular Warty Growth on Chin. There were changes affecting the epidermis as follows:—The Malpighian layer was hypertrophied, this being noticeable chiefly in the elongated interpapillary prolongations. There was no hypertrophy of the corneous layer, such as accompanies warty conditions. The hair-follicles showed various states of disturbed nutrition; in some the root-sheaths were irregular, presenting saccular dilatations; in others the spaces inclosed by the root-sheaths were dilated and filled with *débris*. Many contained two, three, and even as many as five hairs; this condition was well seen in horizontal sections. More striking changes occurred in the corium. On examining vertical sections, large lacunar spaces occupied its most superficial portion, the largest of them replacing the papillæ. These spaces were variously shaped, for the most part elongated, with the long diameter vertical to the surface. Some were flask-shaped or funnel-shaped, with the small end pointing downwards. Interpapillary prolongations from the rete could be traced running alongside of the spaces, evidently distorted and pushed aside by their expansion. Some were empty; most were filled, or partially filled, with an amorphous granular material, scattered in which were a few round cells, deeply stained, answering in size and appearance to white blood-cells. In a very few instances red blood-corpuscles could be traced. The walls of the largest spaces were generally uneven, formed by a more or less consolidated layer of fibro-cellular tissue. In extreme conditions the space appeared merely a ragged cavity, as if produced by distension, rupture, and absorption of the above-mentioned fibro-cellular tissue. There were

many smaller spaces, and deeper down in the substance of the skin their outlines tended to become more regular and round, the walls presenting much more the appearance of the adventitia of a vessel. Whilst looking over the specimens an acarus folliculorum was detected, lying free; this led to the carcful examination of the mouths of the follicles, in many of which two or more acari were seen; they became readily discernible by the deeply stained granular matter in their interior. Unfortunately the material turned out rather unsatisfactorily; and the above were the only points of interest clearly demonstrable.

The PRESIDENT added that he hoped they would be able to examine the other case microscopically. He had shown one of these cases to Dr. Tilbury Fox, who agreed with him that the condition was not the same as in Dr. Fox's case.

Dr. T. C. FOX said, in reference to his late brother's case, that the vesicles did not appear till six months after birth, and that they thereafter increased with the growth of the congenital nævus. The speaker considered that the vesicular condition at last developed in the case referred to was quite similar to that just described in the President's two cases, the microscopical characters being almost identical.

Dr. HOGGAN was of quite a contrary opinion. Whereas Dr. Fox's case was connected with lymphatics, he thought the conditions in the two cases now exhibited were due to obstruction and dilatation of the ducts of the sebaceous glands. The prominent microscopic feature in Dr. Fox's case—vacuolating cells—was absent from Dr. Sangster's preparations.

Dr. THIN thought the unique conditions seen in the President's cases were too localised to have a constitutional origin; moreover, there was no ulceration. The presence of the acari was an important fact, for Dr. Sparks had shown, in a paper read before the Medical and Chirurgical Society some years ago, that very extensive destructive changes took place in the skin of the dog when affected with these parasites. He could not agree with the "lymphatic" explanation, either of Dr. Fox's cases or of those now under discussion, for it was extremely difficult to demonstrate the lymphatics of the skin. A more likely hypothesis was that the cavities in the corium were produced by an exudation from the bloodvessels causing a distension and disruption of tissue.

Dr. SANGSTER, in reply, did not think the conditions he had described were precisely similar to those he had seen in Dr. Fox's case, which, moreover, was complicated with the nævoid growth. He had not found any evidence of implication of the sebaceous glands. He agreed with Dr. Thin that the changes might be explained by an effusion of serum causing rupture of tissue; and it might turn out, in accordance with Dr. Sparks' observations on the dog, that acari were not so harmless as they were generally regarded.

ALVEOLAR SARCOMA OF BRAIN AND OPTIC NERVE.

Mr. BRAILEY exhibited this specimen, taken from an infant three months old. At birth the right eye was slightly protruded, the upper lid being somewhat congested. The tumour gradually increased in size above the orbit, and the child died, very much emaciated, but without any cerebral symptoms. The right anterior cerebral lobe was found invaded by a mass of new growth, which also filled the orbit, the roof of which was absorbed. The tumour mass presented, under the microscope, a reticulated stroma, enclosing epithelioid cells, and the speaker regarded it as an alveolar sarcoma, though closely resembling a carcinoma in structure. An interesting point was that it had evidently begun to grow during intra-utrine life. The eyeball itself was found quite flattened against the front part of the tumour mass.

The PRESIDENT agreed in the opinion that the tumour was an alveolar sarcoma, from its close resemblance to a similar growth he had seen, taken from the subcutaneous tissue.

Mr. GODLEE remarked that a critcrion for distinguishing between some of these alveolor sarcomata and carcinoma was the existence of a very fine stroma between individual cells. A specimen he had described some years ago, taken from the skin, showed this point.

Dr. THIN suggested the use of cosin as a staining agent to help in the differentiation between cells of epithelial and connective tissue origin.

OVARIAN CYST WHICH HAD REPEATEDLY RUPTURED.

Mr. MEREDITH exhibited this specimen, removed by Mr. Thornton from a single woman forty-seven years of age. She first noticed abdominal enlargement ten years ago, and in 1871 was tapped. The cyst filled up again in four months, but then suddenly the swelling disappeared, there being some abdominal pain at the time and marked diuresis. Such refilling and spontaneous rupture took place three or four times every year up to April, 1879, when she was tapped. After that the cyst refilled twice, and twice ruptured. In September she came to the Samaritan Hospital, the cyst being then collapsed. After other two months it had refilled, and was removed by Mr. Thornton. It contained twenty-one pints of fluid, and was a unilocular ovarian cyst, with walls very sparingly vascular. The interior showed much atheromatous change, and numerous points of ulceration, extending to various distances through to the outer layers. Thus was explained the repeated spontaneous rupture. These apertures must have closed up rapidly.

INTRACAPSULAR FRACTURE OF THE FEMUR.

Mr. H. MORRIS exhibited a recent specimen of intracapsular fracture occurring in an old man. The interest of the case consisted in the difficulty of diagnosis owing to the fact that a large bony growth from the posterior border of the great trochanter had given rise, during life, to an appearance simulating dislocation of the head of the bone on to the dorsum ilii.

Mr. BAKER drew attention to the two specimens of dislocation of the head of the femur on to the dorsum ilii in hip disease, shown (by card) by Dr. Lediard. They illustrated what he (Mr. Baker) had maintained, that such dislocation was not at all common in early stages of hip disease, for Dr. Lediard's two specimens were from cases of advanced disease. Moreover, the extent of dorsal dislocation they exhibited was not so complete as is usually said to occur.

The following specimens were exhibited by card:—

By the PRESIDENT—Specimens and drawings of two cases of Osteitis in connexion with Inherited Syphilis.

By Mr. HULKE—Drawings from cases of Cancer of the Breast.

By Dr. EWART—1. Complete Occlusion of the Right Division of the Pulmonary Artery, the result of disease; Atheroma of Pulmonary Artery. 2. Broad Fibro-cretaceous Ring surrounding the Heart in the situation of the Auriculo-ventricular Sulcus.

By Dr. LEDIARD—1. Two specimens of Dislocation of Hip-joint from Disease. 2. Kidneys United by a Fibrous Band.

JABORANDI AS A GALACTOGOGUE. — Dr. Sumrall reports to the Jersey Medical Society that he has used jaborandi successfully as a galactogogue. The patient was the mother of three children, for none of whom had she secreted any milk. Her general health was quite poor. Immediately after labour, as there had been no filling of the breasts, five drops of fluid extract of jaborandi were given every three hours. Milk-fever came on in forty hours, and with it came a thorough and healthful establishment of the flow of milk.—*New York Med. Jour.*, December.

CANCER IN THE MALE BREAST.—Dr. Valerani, senior surgeon of the Casale Monferrato Hospital, is of opinion that cancer in the male breast is of more frequent occurrence than is generally admitted, for, although his medical career has not been a long one, he has already met two well-marked cases of scirrhous breast occurring in men aged forty-nine and sixty years. Nor can he agree with Vidal that relapse is of rare occurrence in men, for in both these men the disease appeared a second time within a twelvemonth after the first operation. In both it proved fatal after the second operation.—*Annali Universali*, November.

POPULATION OF GREECE.—According to the official report on the census of 1879, the kingdom of Greece is inhabited by 1,679,775 persons, 881,080 being males, and 788,685 females. At the preceding census in 1870 the population amounted to 1,457,894—the increase being therefore 221,881 in nine years. This increase, which is chiefly furnished by the floating population and foreigners, averages 1·69 per cent. per annum, the increase during the prior decennial period having been only 1 per cent. The population may therefore become doubled in less than forty years. —*Jour. de la Soc. de Statistique*, December.

MEDICAL NEWS.

UNIVERSITY OF DUBLIN: SCHOOL OF PHYSIC IN IRELAND:—At the recent Michaelmas Term Examinations for the degrees of Bachelor of Medicine and Bachelor of Surgery, the following candidates were successful:—

For the degree of M.B.—

Barry, John P.	Moore, Malcolm H.
Beatty, Wallace.	Sawyer, Richard H.

For the degree of B.Ch.—

Beatty, Wallace.	Pratt, Joseph D.
Johnston, Robert H.	Williams, John A. De Courcy.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At the Examination held on Monday, December 8, 1879, and following day, the undernamed gentlemen having passed their final examination for the Letters Testimonial of the College, and having made and subscribed the declaration, were admitted Licentiates, viz.:—

Robert Allman, Richard John Baker, Charles James Barry, James Henry Beattie, Robert Ettingsall Beattie, Charles Mattbew Brady, Hubert Watson Brownrigg, Charles Hayden Cox, James Davison, Matthew Digan, George Digby, George Philip Elliott, Hubert Flanagan, John Gray, Arthur Greene, Arthur Robert Harper, Thomas Higgin, John Anderson Irvine, L'Estrange Isdell, James Kernan, Anthony Kidd, Patrick Joseph Lenihan, John Stephen M'Ardel, John M'Cullagh, John M'Loughlin, George Alexander Montgomery, Charles George Drummond Moss, John Murphy, Thomas Joseph O'Donnell, James Joseph O'Dwyer, John Pollock, Wm. James Swanson, John Whittaker Tate, Wm. Augustus West, Edward De Lacy Wickham, and John Wilson.

APOTHECARIES' HALL, LONDON.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Wednesday, December 24, 1879:—

Heritage, Julius Harvey, Montpelier-road, Peckham.
Lowe, Howard Griffiths, Birmingham.
Mehta, Maneckjee Serabjee, M.D. Brussels, L.R.C.P. Edin., Bombay.
Strover, Herbert Charles, St. Heliers, Jersey.
Swale, Harold, Guildford.
Thornton, James Parsons, Riding-street, Southport.
Wright, George Arthur, M.B. Oxford, F.R.C.S. Eng., Vauge, Essex.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to all new Appointments that take place.

ARMSTRONG, J., M.B., L.R.C.S. Edin.—Honorary Physician to the Liverpool Infirmary for Children.

BROWN, J. W., M.A., M.B. Oxon., M.R.C.S. Eng.—Medical Registrar to the Middlesex Hospital.

GABBETT, HENRY SINGER, B.A. (first Gold Medal), M.B. Dub.—Medical Registrar to the London Hospital.

HOBSON, JOHN MORRISON, M.B. Edin., L.R.C.P. Lond., M.R.C.S. Eng.—House-Surgeon to the North-Eastern Hospital for Children, Hackney-road, E.

MACLAREN, CHARLES, M.B., C.M. Edin.—House-Surgeon to the Bury Dispensary.

MOULLIN, C. W. MANSELL, M.A., M.D. Oxon., F.R.C.S.—Surgical Registrar to the London Hospital.

PHILLIPS, S. P., M.B. Lond., M.R.C.S. Eng.—Surgical Registrar to the Middlesex Hospital.

BIRTHS.

COULSTON.—On December 25, at Marlborough road, Gunnersbury, W., the wife of Charles Stewart Coulston, M.B., of a daughter.

EVANS.—On December 23, at The Beeches, West Bromwich, the wife of Alfred Paget Evans, M.R.C.S., of a son, stillborn.

FURBER.—On December 11, at 83, Gloucester-road, Queen's-gate, South Kensington, S.W., the wife of Alfred William Furber, L.D.S.R.C.S.E., of a daughter.

HAMMOND.—On December 21, at Nuneaton, the wife of William Hammond, L.R.C.P., of a daughter.

HILL.—On December 22, the wife of Berkeley Hill, F.R.C.S., of a son.

PRINGLE.—On November 25, at Meerut, North-West Provinces, India, the wife of Surgeon-Major R. Pringle, M.D., H.M.'s Bengal Army, of a daughter.

MARRIAGES.

CAPON—ROBERTSON.—On December 30, at Paddington, Herbert J. Capon, M.D., M.R.C.S. Eng., of 159, Edgeware-road, Hyde-park, to Harriet, only daughter of the late William Robertson, Esq., of Aldersgate-street.

HART—SUTTON.—On December 23, at Sevenoaks, Arthur Hart, C.A., of Glasgow, to Isabella Hamel, youngest daughter of Henry Gawen Sutton, M.D., of Finsbury-square, London.

LACY—BROCK.—On December 16, at Guernsey, Alexander Gairdener Lacy, M.R.C.S., to Marion Emily, second daughter of William Brock, Esq., of Belmont, Guernsey.

LEE—MYERS.—On December 30, Robert James Lee, M.A. Cantab., M.D., F.R.C.P., of 6, Savile-row, to Katie, eldest daughter of Mr. Myers, of Savile-row, St. James's.

RABAN—BIRCH.—On December 4, at Barrackpore, East Indies, W. F. Raban, Esq., to Evelyn, second daughter of S. B. Birch, M.D., of Harley-street, London.

DEATHS.

COLLIS, JOHN GEORGE, M.D., Surgeon 23rd M.N.I., at Port Blair, Andaman Islands, on October 26, aged 32.

CUTLER, THOMAS, M.D., at Spa, Belgium, on December 22, aged 69.

EMMERSON, CHARLES, M.D., of Sandwich, Kent, at Torquay, on December 19, aged 64.

FINCH, JOHN COURT, son of Henry Finch, M.D., at Colchester, on December 20, aged nine months.

JACKSON, ERNEST CARR, M.R.C.S., at 15, Harley-street, Cavendish-square, W., on December 26.

JACKSON, THOMAS HAYES, M.D., F.R.C.P., at Grange-road, Darlington, on December 21, aged 69.

KENDLE, JOHN SHERING, Esq., eldest son of Samuel Shering Keddle, M.D., at Merriottsford, Crewkerne, on December 8, aged 45.

LONG, JAMES, F.R.C.S., at 15, Hardman-street, Liverpool, on December 20, in his 71st year.

LYNCH, EVELYN ANNIE, daughter of J. Roche Lynch, L.R.C.P., at 8, Boyne-terrace, Notting-hill, on December 20, aged eight weeks.

MYERS, GLADY BLANCHE, daughter of Arthur B. R. Myers, M.R.C.S., A.M.D., Coldstream Guards, at Shorncliffe Camp, on December 21.

TASSELL, ROBERT, M.D., at Dover, on December 20.

YONGE, FRANCIS DUKE, M.D., at Liskeard, Cornwall, on December 25, aged 65.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BENFORD GENERAL INFIRMARY.—Surgeon. Applications, with copies of testimonials, to be sent to the Secretary on or before January 8.

LIVERPOOL DISPENSARIES.—Assistant Resident House-Surgeon. Candidates must be unmarried and duly qualified. Applications, with testimonials and registration certificates, to be sent to the Secretary, Leith Offices, 34, Moorfields, Liverpool, on or before January 29.

LONDON HOSPITAL MEDICAL COLLEGE, TURNER-STREET, MILE-END, E.—Warden to the Medical School, and Secretary to the College Board. Applications, with copies of testimonials, to be sent to the Acting Secretary of the College Board before January 5.

SOUTH MOLTON UNION.—Medical Officer of Health. Applications, with copies of testimonials, to be sent to Mr. R. Louis Riccard on or before January 9.

SUNDERLAND AND BISHOPWEARMOUTH INFIRMARY.—Physician. Candidates must possess the degree of Doctor in Medicine of some University of the United Kingdom, and be registered accordingly, and are not to undertake to practise in surgery or midwifery. Applications, with testimonials, to be sent to the Secretary, John Kitts, Esq., on or before January 28.

UNIVERSITY COLLEGE, LONDON.—Professor of Medical Jurisprudence. Applications to be sent to Talfourd Ely, M.A., Secretary, on or before January 7, at the office of the College, where further information can be obtained.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Stockbridge Union.—Mr. William K. Loveless has resigned the First District: area 19,996; population 3824; salary £78 per annum.

Holyhead Union.—The Aberffraw District is vacant by the death of Mr. Owen Owen: area 23,495; population 5268; salary £60 per annum.

Thirsk Union.—Mr. James William Smith has resigned the Kilburn District: area 2662; population 425; salary £8 per annum.

APPOINTMENTS.

Barton Regis Union.—Wm. G. Grace, M.R.C.S. Eng., L.R.C.P. Edin., to the Second North District.

Clun Union.—James B. Bailey, M.D. Ire., L.R.C.S. Edin., to the Hopesay and Clunbury District.

Kington Union.—Frederic Bromley, M.R.C.S. Eng., L.S.A., to the Kinsham District.

Ripon Union.—Wm. Dixon Jefferson, L.R.C.P. Edin., L.M. Edin., M.R.C.S. Eng., to the First District.

Barrow-upon-Soar Union.—Richard Frank Bell, L.R.C.P. Edin., M.R.C.S. Loud., to the Barrow-upon-Soar District.

South Shields Union.—Charles J. Sutherland, L.R.C.P. Edin., L.F.P.& S. Glasg., to the Laygate and Tyne Dock District.

Stokesley Union.—Mark Malvin, L.R.C.P. Edin., M.R.C.S. Eng., to the Hutton District.

VACCINATION AND REVACCINATION IN GERMANY IN 1878.—In the *Veröffentlichungen* of the *K. Deutschen Gesundheitsamtes* for December 15 is given a detailed tabular view of the results of vaccinations and revaccinations performed throughout the German Empire during 1878, with a comparative view of those of the two former years. According to this there were practised 1,492,537 vaccinations in 1878, with 1,277,960 (85·6 per cent.) successful results; of revaccinations there were 1,116,514, with 856,959 (76·7 per cent.) successful results.

Mr. Spencer Wells has just received the diploma of Honorary Fellow of the Physico-Medical Society of the University of Moscow.

London Street Accidents.—The returns of the Society for Preventing Street Accidents for the weeks ending the 20th and 27th ult. show respectively—killed, 2 and 3; run over, 30 and 50.

Trinity College, Dublin.—On Saturday, December 20, 1879, the Board of Trinity College appointed Mr. H. W. Mackintosh, University Professor of Zoology, to the Curatorship of the Museum of Anatomy and Zoology. The degree of M.A. was conferred *stip. cond.* on Professor Mackintosh at the recent Winter Commencements.

Medical Society of London.—Mr. W. F. Teevan, B.A., F.R.C.S., will deliver the Lettsomian Lectures on Mondays, January 5, 19, and February 2, at 8.30 p.m. Subject, "The Treatment of Stricture of the Urethra, Enlarged Prostate, and Stone in the Bladder, with special reference to recent progress."

Sewage of the Thames.—According to returns furnished by the engineers of the Metropolitan Board of Works, the average daily quantity of sewage pumped into the river Thames was 301,782 cubic metres at Crossness, and 432,350 cubic metres at Barking—equivalent to about as many tons by weight.

Iodoform in Chronic Arthritis.—Professor Gubler employed ten parts of iodoform to twenty of sulphuric ether and twenty of alcohol. When dissolved the liniment should be applied to the diseased joint by means of a pencil. The parts should then be covered with a piece of oiled silk. For the same affection Dr. Cottle dissolves iodoform in chloroform. —*Union Méd.*, December 23.

Epidemiological Society of London.—A meeting of the Society will be held in the Council-room of University College, Gower-street, on Wednesday, January 7, at 8 p.m., when the following papers will be read:—"Notes on the Relapsing Fever of India," by Dr. Norman Chevers; "Remarks on Epidemic Diseases—Men and Animals—in the Colony of Natal," by Surgeon-General Ross. C.I.E.

Podophyllin in Cerebral Hyperæmia.—Dr. Crist, of Indianapolis, discussing the value of podophyllin, lays special stress upon its usefulness in cerebral congestion, or in incipient inflammation of the meninges. It exercises, he says, a very complete and controlling influence over this pathological condition. When employed for such purposes it must be given in moderately full doses, and continued for a considerable length of time.—*New York Med. Jour.*, Dec.

Académie de Médecine.—At its meeting on December 23 the Academy filled up the vacancy in the Section of Medical Pathology (occasioned by the death of Professor Chauffard) by the election of Dr. Alfred Fournier, who obtained the votes of thirty-nine of the seventy-three members present; Dr. Bucquoy obtaining thirty-four. Professor Broca was also elected Vice-President of the Academy for 1880 (to become President in 1881) by the votes of fifty-four of the sixty-two members present.

South London School of Pharmacy.—At the annual dinner, on December 19, at the Horns Assembly Rooms, Kennington-park, Dr. Julius Pollock presented the medals and certificates to the following successful competitors:—Senior Chemistry—medal, Mr. Eaton; certificate, Mr. Harburn. Junior Chemistry—medal, Mr. Banks; certificate, Mr. Littlefield. Materia Medica—medal, Mr. Littlefield; certificate, Mr. Slicer. Botany—medal, Mr. Parkes; certificates, Messrs. Banks and Grover. Pharmacy—medal, Mr. Webb; certificates, Messrs. Fidler and Beech.

Wyatt-Edgell Prize Essay.—The munificent prize of £200 has been offered by the Rev. E. Wyatt-Edgell, through the Sanitary Institute of Great Britain, for the best essay that may be sent in by August 1 next, on "The Cause of Hereditary Tendencies in Health and Disease." The subject is of first importance, and the Council of the Institute expects to receive many valuable contributions in competition. It is a matter for regret that the generous donor, who for a long time has filled the office of honorary treasurer of the Institute, is obliged to resign office owing to impaired health, which demands for a time residence abroad. The Chairman of Council of the Institute, Dr. Benjamin W. Richardson, and Dr. W. Farr, F.R.S., are appointed adjudicators of the prize.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

A Prize Essayist.—Only one essay has been sent in for the Collegial-Triennial prize. "The John Hunter Medal" has never been awarded for it yet.

M.R.C.S.—The subject for the Jacksonian Prize for the present year, 1880, is "The History, Principles, Practice, and Results of Antiseptic Surgery," for which, no doubt, there will be many competitors.

Mr. Williams.—A very good Life of Abernethy was published by his pupil, Mr. George Macilwain. He is still alive, although, as he was admitted a member of the College in 1818, he cannot be far off from fourscore years.

Fire Burial.—A Cremation Society has been established at Rome, of which Dr. Francesco Raffi, the well-known physician, is president; and the Avvocato Giammiarioli vice-president.

W. Gascoigne L.—No doubt up to the seventeenth century the average duration of human life, and its modifications by age, were unknown. It was in 1815 that Mr. Milne's work containing a systematic and original digest of the science of life-contingencies appeared.

Princess Alice Memorial Hospital, Eastbourne.—The inhabitants of Eastbourne having resolved to erect a hospital to the memory of the late Princess Alice, have subscribed a sum of £2000 for that purpose, leaving a like amount still to be contributed. The hospital is to be named the "Princess Alice Memorial Hospital."

G. L. L., Limehouse —1. Yes. 2. Miss Marsh's Convalescent Hospital, Blackrock, Brighton, is the only convalescent hospital which receives men in that town, and the larger accommodation is reserved for them. The patients are chiefly from the poorest parts of the East of London, and many of them come from the London Hospital. There is an orphanage in connexion with this institution.

Thomas Guy.—It is one of the few mistakes made by Mr. Wadd in his interesting Memoirs, as no one knew better than himself all the facts of the case. Moreover, Sir Astley's name was spelt Cooper, and not Cowper. Mr. Wadd was a member of the Council of the College of Surgeons, where you will see his portrait. He was killed in Ireland by jumping off a car, the horse of which had bolted.

Addenbrooke's Hospital, Cambridge.—At the quarterly court held on Monday, the question of increasing the number of physicians was ordered to be deferred pending certain changes in the University. A proposal requiring the medical students to pay fees to the Hospital was considered, but on a motion for referring the question to committee, an amendment was adopted by twenty-two to twelve, that the court proceed to the next business.

Cuvier, Gateshead.—Mr. William Clift, F.R.S., was the first Conservator of the Museum of the College of Surgeons; he was born at Bodmin, February 14, 1772, and died June 20, 1849. You will find a biographical notice of him in vol. xix. of this journal, page 667. He was succeeded by his son-in-law, Professor Owen, F.R.S., who, on his retirement, was succeeded by Mr. Quekett, F.R.S. On the death of Mr. Quekett, the gentleman who now so worthily fills the office was appointed.

Tea Two Hundred Years ago.—The *London Gazette* of December 16, 1680, has the following:—"These are to give notice to persons of quality, that a small parcel of most excellent tea is by accident fallen into the hands of a private person to be sold; but, that none may be disappointed, the lowest price is thirty shillings a pound, and not any to be sold under a pound weight, for which they are desired to bring a convenient box. Inquire at Mr. Thomas Eagle's, at the King's Head, in St. James' Market."

An Itinerant Milk Vendor.—At Brighton an itinerant milk vendor has been charged with selling adulterated milk. The Sanitary Committee of the Corporation were the prosecutors. The defendant's business was exclusively confined to the retail of milk from hand-barrows by himself and his assistants. The prosecution showed that the milk contained 50 per cent. of water. The borough analyst said it was "a poor, consumptive-looking fluid, devoid of nutrition." To this the defendant replied that he never professed to sell pure milk; that the public, who were the best judges, purchased 120 gallons a day of him, whilst the sale when he first commenced selling it, twelve months ago, was only four gallons a day. A fine of £5 and costs was inflicted.

Woorari Poison.—In an interesting work published in Australia, the author, Sir Richard Schomburgk, M.D., in giving an account of the manufacture of this deadly arrow-poison by the Macusis, an Indian tribe in British Guiana, states that much secresy is observed, and that the "most difficult task for the man-cook is that before and during the preparation of the *Urari* (of which full particulars are given) he has to observe a strict fast. A further inexorable law demands that during the preparation no woman or girl, and above all things no pregnant woman, must come near the urari or woorari house where it is made; it would be even injurious to the making of the poison if the wife of the cook should be pregnant."

The Tobacco Problem.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Your correspondent, "A Dreamer with Open Eyes," in his rejoinder, does not seem satisfied that I have solved the problem. Be that as it may, I do not see upon what other principle the question can be disposed of, apart from that which is based upon the laws of physiology; and I fail to perceive that *he* has discovered any fresh light upon the subject, though he has advanced much in defence of the favourite occupations both of smoking and chewing, which is at once to enter upon delicate and debateable ground having a moral bearing, and which is departing from the question at issue without solving it. It is useless to enter upon controversy touching tender points of conscience connected with the expediency or otherwise of cultivating the habit of tobacco-smoking—points whose stings, being realities, are sharper than Macbeth's "dagger of the mind, a false creation." The habit, in the opinion of some, however unacceptable to the οἱ πολλοί, is of questionable propriety—"noble" though it may be considered by your correspondent. But it is in vain to expect to arrive at unanimity of sentiment or satisfactory conclusions. The practice of smoking being of a private and personal nature, each one is at liberty to indulge in the "creature" comforts if it seems good to himself that he should do so, allowing at the same time a tolerance of opinion and practice to others in their different pursuits and pastimes. There is neither praise nor blame to either party, the motive being all in all. Thanking your correspondent for his response, I am, &c.,

Gringley-on-the-Hill, December 27, 1879. R. H.

Abuse of Medical Charities.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—The Secretaries of the Bradford Medico-Ethical Society ask whether your readers can suggest any check in giving relief at general or special hospitals to those who are able to pay for private advice: they are anxious to hear of a remedy.

The remedy, Sir, is in the hands of the medical officers. As long as the medical officers of those institutions find their own advantage in encouraging the visits of the well-to-do patients, the attendance of those persons will continue. The governors could not introduce such persons to the benefits—or the abuses—of the charity against the will of the medical officers. The same may be said of the dispensaries, provident institutions, and benefit clubs, which are even to a greater extent infested by persons able to pay a practitioner for their relief. I am, &c., Nosocomianus.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—In your columns we are asked by the Bradford Medico-Ethical Society to "suggest any check in the giving of medical or surgical relief to those who are able to pay for private medical or surgical advice." I beg to suggest a simple method available for large towns, and used by myself with much success. I was in the habit of entering name, address, and disease of every new patient in a ledger, for which purpose I inquired these particulars. My assistant immediately, without being observed by the patient, turned to the address given in the directory of the city where I practise, and in a moment we knew who the patient was, and his or her probable financial calibre; and, if in a position to pay a doctor, he or she was shown the door. This system is quite simple, expeditious, and efficacious, and works without the least knowledge on the part of the patient of the *modus operandi*. It is, of course, not applicable to any town which is not large enough for a directory; nor, perhaps, to dispensaries where subscribers have rights of recommendation. I am, &c., Wide-awake.

Yellow Fever Epidemics, Memphis.—In reference to the late yellow fever epidemic at Memphis, the *New York Herald* writes:—"A despatch from Memphis reports the formation of ice in all the streets of that city; and at this point, therefore, begins the preparation for the epidemic of 1880, if there is to be one. Winter may, or may not, purify the city of Memphis. It did not do this last year. Cold weather may arrest the activity of the noxious element that is the cause of yellow fever, yet not destroy that element. If the coming winter is short and mild, and no more is done to put Memphis in a good sanitary condition than was done last winter, the occurrence of another epidemic next summer is a certainty. Houses in every part of them, furniture of every sort, carpets, bedding, curtains, sofas, chairs, and the clothes of the whole population—all these things are extensively infected, saturated even, with the virulent yellow fever poison. What is the likelihood that all these will ever be disinfected or destroyed? In the absence of a conflagration which would burn the city out, there is no probability whatever of either event. Disinfection, in fact, is not possible short of destruction. Apparently, Memphis must be given over as a city in which the yellow fever has taken root in such a way that it will henceforth be permanently endemic there."

The Abatement of a Nuisance.—In an action heard before the Master of the Rolls—the London General Omnibus Company *v.* Mead—it appeared that the plaintiffs were the occupiers of a piece of land abutting on the Paddington basin of the Regent's Canal, on which were erected a granary, office, and cottages for the workpeople employed on the premises, and this action was brought to obtain an injunction restraining the defendant from carrying on his business on the wharf adjoining the plaintiff's premises in such a manner as to cause a nuisance to the plaintiffs. The defendant was the contractor for the removal of dust for several parishes, and was also contractor for "slopping work" in various parts of London. The dust and refuse were brought to the defendant's wharf, and the plaintiffs alleged were accumulated there, the result being a most offensive stench injurious to health. A mass of evidence, occupying nearly three days, was respectively adduced, but it was admitted that since the commencement of the action the nuisance had been abated, and the chief question in dispute was by whom the costs of the action were to be paid. The defendant finally gave an undertaking in the terms of the injunction asked for, and an order was made upon him to pay the plaintiff's costs.

Resurrectionists, Canada.—It would appear that the medical students of McGill and Bishop's Colleges were short of "subjects," and took advantage of a dark and boisterous night, on November 29, to invade the Roman Catholic cemetery at Montreal. They opened some graves, and took out the bodies of two adults—male and female—of the respectable citizen class. The cemetery guard's attention was attracted by the barking of the dogs, and a chase ensued, but the students, throwing the bodies over the cemetery fence, succeeded in making off with them, leaving some of their tools behind. Active measures were at once taken to discover the culprits, and the two bodies were found both mutilated—one in the McGill College dissecting room, and the other in Bishop's College, the relatives of the deceased, however, declined to take legal proceedings, the recovery and re-burial of the bodies satisfying, under the circumstances, their demands.

Juvenile Dangerous Public Performances.—On the 1st inst. the new Act came into operation "to regulate the employment of children in places of public amusement in certain cases." A penalty of £10 is to be imposed on any person who shall cause a child under the age of fourteen to take part in any public exhibition or performance whereby, in the opinion of a court of summary jurisdiction, "the life or limb of such child shall be endangered," and this penalty is to attach to parents and other persons. When, in the course of such exhibition, any accident occurs to the child the employer is liable to pay damages and to be indicted for an assault, and the court before whom such employer is convicted on an indictment may award compensation not exceeding £20 to the child, or to some person to be named by the court on behalf of the child, for the bodily harm caused to the child. Employers are not to be liable twice for the same offence—that is, before a magistrate and on an indictment.

Capital Punishment in France.—The opponents of capital punishment, says the *Glasgow News*, will probably make good use of an incident that has lately happened in Paris. The man known as the Beauvais murderer, who had committed a crime of frightful atrocity, was duly decapitated, and a dissection was made within five minutes of the execution. The result was the immediate discovery of lesions in the brain showing that the man was an irresponsible lunatic. Of course, if that was the case, the man ought never to have been executed at all; but the misfortune is that he did not give sufficient indications of his lunacy in time to save his life. The incident will probably have the effect of still further restricting capital punishment in France, where it appears that five murderers have recently been saved from the guillotine notwithstanding that their crimes were conclusively proved. The French seem to go on the principle that unless the murder is accompanied by mutilation, or some other exceptional atrocity, the murderer ought not to be executed; and the consequence is, that those who are most likely to have been insane are executed, while the more wary criminals escape with imprisonment.

Urban and Rural Sanitary Works.—The Northern Local Board have just carried out drainage works in the modern watering place of Westward Ho!——The Metropolitan Board of Works has resolved to apply to the Home Secretary for a general authority to remove any premises acquired by that Board, under the Artisans' Dwellings Act, in which fever or other infectious diseases were prevalent.——The whole of the works in connexion with the water-supply of the Borough of Brighton have been practically completed. The entire scheme has cost nearly £50,000. The supply drawn from the watershed of the downs is practically inexhaustible. The quantity of water used daily is over 2,000,000 gallons, and the reservoirs have a capacity of 6,450,000 gallons.——A very large laundry is being erected for the London and Provincial Steam Laundry Company, in the Battersea-park-road. It is intended to fit the buildings with the most perfect machinery and all the latest improvements, and to light them by means of the electric light.——A cottage hospital has been opened at Evesham by the Mayor. It provides six beds, and has cost £1200.——The Parsonstown Town Commissioners have decided to carry out a main sewer through the southern portion of the town.——The Joint Infectious Diseases Hospital Committee for Milton Urban and Rural Districts, and Sittingbourne, have decided to erect an infectious hospital with accommodation for twenty-four beds.——The Margate Town Council has purchased, at a cost of £80,000, the local waterworks undertaking. The transfer will be formally make on January 1.——The Local Board of Pontypool is about to acquire the waterworks of that town.——A scheme of sewerage has been adopted for the town of Appleby.——The Vestry of Seaford, Sussex, has approved the application mode to the Board of Trade by the promoters of the East Blatchington and Seaford Waterworks, for the granting of a provisional order to enable them to supply water within the parishes of Seaford, East Blatchington, and Bishopstone.

BOOKS AND PAMPHLETS RECEIVED—

Year-Book of Pharmacy for 1879—Medical and Surgical History of the War of the Rebellion, vol. ii.—Triennial Report of the Saughton Hall Institution, by J. Batty Tuke, M.D.—Prospectus of the Union Jack—National Anti-Compulsory Vaccination Reporter—Mind: a Quarterly Review of Psychology and Philosophy—Skin Diseases, by George Henry Fox, A.M., M.D., parts 1, 2, 3, 4—Transactions of the Odontological Society of Great Britain—Tenth Annual Report on the Health of Salford—Pay Hospitals, by Henry C. Burdett—Traité Clinique des Maladies de la Moelle Épinière.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Centralblatt für die Medicinischen Wissenschaften—Gazette Hebdomadaire—Louisville Medical News—Nature—National Board of Health Bulletin—Revue Médicale—The Girl's Own Paper—Weekly return of Births, Marriages, and Deaths—American Bookseller—Brief: the Weekly News—Index Medicus—El Siglo Medico—American Practitioner—Boston Home Journal—Night and Day—Michigan Medical News—Revue d'Hygiène—Boston Medical and Surgical Journal—Vaccination Inquirer—Monthly Homœopathic Review—Morningside Mirror—Glasgow Medical Journal—Journal of Trinity College, London.

COMMUNICATIONS have been received from—

Mr. E. L. Hussey, Oxford; Dr. Winter; Dr. J. Jeffries, Boston; N. G., Gringley-on-the-Hill; Surgeon-Major Garden, Cawnpore; Dr. J. Moore; Dr. N. Chevers, London; Mr. W. R. Parker, London; Mr. Spencer Wells, London; Dr. Elliott, Carlisle; Dr. May; Mr. T. M. Stone, London; The Registrar of Apothecaries' Hall, London; Mr. J. Chatto, London; Dr. Edward I. Sparks, Mentone; The Secretary of the Association for Sea-Water Supply to London; The Hon. Secretary of the Obstetrical Society of London; Dr. Henry Rayner, London; The Hon. Secretary of the Epidemiological Society of London; Mr. W. F. Teevan, London; Dr. William Farr, General Register Office; The Secretaries of the Harveian Society of London; The Secretary of the Royal Institution; The Sanitary Commissioner, Punjaub, India; Dr. A. P. Stewart, London; The Registrar-General, Edinburgh; Dr. Taylor, London; The Secretary of the Association of Surgeons practising Dental Surgery; Dr. De Havilland Hall, London.

APPOINTMENTS FOR THE WEEK.

January 3. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

Royal Institution, 3 p.m. Prof. Tyndall, "On Water and Air."

5. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. First Lettsomian Lecture—Mr. W. F. Teevan, "On the Treatment of Stricture of the Urethra."

6. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Pathological Society, 8½ p.m. (Annual Meeting for Election of Officers, etc.) Dr. Ord—1. Large Gall-Stone passed per Anum, with Remarks on the Structure and Formation of Biliary Calculi; 2. Some Urinary and Intestinal Calculi. Mr. F. Eve—Syphilitic Disease of Bone in a Fœtus of Six Months. Dr. Coupland—Specimens of Late Hereditary Syphilis. Dr. Lees—Malformation of the Heart, with Transposition of Aorta and Pulmonary Artery. Mr. Godlee—Dislocation of the External Semilunar Cartilage. Card Specimens: Dr. Coupland—Organs affected by Visceral Syphilis. Mr. Eve—1. Dislocation and Fracture of Clavicle; 2. Dislocation forwards of First Phalanx of the Thumb. Dr. R. Smith—Œsophagus and Stomach from a Case of Carbolic Acid Poisoning; and other Specimens.

Royal Institution, 3 p.m. Prof. Tyndall, "On Water and Air."

7. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 1½ p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.

8. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

Harveian Society, 8½ p.m. Anniversary. Election of Officers; President's Address; *Conversazione.*

Royal Institution, 3 p.m. Prof. Tyndall, "On Water and Air."

9. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

Clinical Society (Council Meeting, 7.30 p.m.), 8½ p.m. (Annual Meeting.) Election of Officers. Report of the Committee appointed to inquire into the Deleterious Effects which follow the Prolonged and Continuous Use of Chloral in Ordinary Doses. Dr. Goodhart, "A Case of Rheumatic Fever treated with Salicylate of Soda, and Terminating Fatally." Mr. Pick, "A Case of Subastragaloid Dislocation." Dr. Hewan (for Mr. Adams). "A Case of Bullet-Wound of the Lung." Mr. Brodhurst will show a Case of Genu Valgum (shown also last session). Mr. J. Smith will show—1. A Case of Spontaneous Gangrene; 2. Two Cases of Cystic Hygroma; 3. A Large Nævus.

Queckett Microscopical Club (University College), 8 p.m. Meeting.

VITAL STATISTICS OF LONDON.

Week ending Saturday, December 27, 1879.

BIRTHS.

Births of Boys, 918; Girls, 831; Total, 1749.
Average of 10 corresponding years 1869-78, 2061·6.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	935	943	1878
Average of the ten years 1869-78	877·0	883·5	1760·5
Average corrected to increased population ...	...	...	1884
Deaths of people aged 80 and upwards ...	...	...	61

Note.—The births and deaths registered last week may be compared with the average numbers in the corresponding weeks of the ten years 1869-78 after raising the average by 7 per cent. for increase of population.

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa
West	561359	1	3	11	3	15	1	...	...	1
North ...	751729	...	4	16	2	35	...	5	...	2
Central ...	334369	...	5	5	...	9	...	1	...	2
East	639111	...	9	19	4	18	...	3	2	2
South	967692	1	27	35	2	52	...	4	2	1
Total	3254260	2	48	86	11	129	1	13	4	8

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	30·338 in.
Mean temperature	31·4°
Highest point of thermometer	42·5°
Lowest point of thermometer	22·0°
Mean dew-point temperature	30·5°
General direction of wind	Variable.
Whole amount of rain in the week	0·03 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, Dec. 27, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1879.*	Persons to an Acre. (1879.)	Births Registered during the week ending Dec. 27.	Deaths Registered during the week ending Dec. 27.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In centimetres.
London	3620868	48·0	1749	1878	42·5	22·0	31·4	−0·34	0·03	0·08
Brighton	105608	44·9	44	34	44·3	23·6	34·9	1·61	0·07	0·18
Portsmouth ...	131821	29·4	57	53	...	...	...	...	...	...
Norwich	85222	11·4	40	42	40·2	23·0	31·4	−0·34	0·00	0·00
Plymouth	74293	53·3	39	66	49·0	26·5	38·9	3·83	0·18	0·46
Bristol	209947	47·2	95	122	46·6	25·0	35·3	1·84	0·06	0·15
Wolverhampton ...	75100	22·1	36	37	40·8	26·0	31·7	−0·17	0·15	0·38
Birmingham ...	388884	46·3	217	186	...	...	...	...	...	...
Leicester	125622	39·3	80	74	...	...	...	...	...	...
Nottingham ...	169396	17·0	104	106	44·3	25·5	32·7	0·39	0·01	0·03
Liverpool	538338	103·3	288	367	53·9	28·2	37·7	3·17	0·13	0·33
Manchester ...	361819	84·3	200	199	...	...	...	...	...	...
Salford	177849	34·4	115	104	...	...	...	...	...	...
Oldham	111318	23·9	64	51	...	...	...	...	...	...
Bradford	191046	26·5	100	94	43·4	24·6	35·9	2·17	0·00	0·00
Leeds	311860	14·5	200	162	44·0	25·0	35·3	1·84	0·01	0·00
Sheffield	297138	15·1	175	109	48·0	25·5	37·1	2·84	0·09	0·23
Hull	146347	40·3	80	76	42·0	25·0	32·6	0·34	0·30	0·76
Sunderland ...	114575	41·4	91	35	50·0	27·0	38·2	3·44	0·01	0·03
Newcastle-on-Tyne	146948	27·4	88	79	...	...	...	...	...	...
Edinburgh	226075	53·9	116	91	49·7	25·0	39·5	4·17	0·46	1·17
Glasgow	578156	95·8	324	304	...	...	...	...	...	...
Dublin	314666	31·3	144	271	52·3	23·8	42·9	6·03	0·39	0·99
Total of 23 Towns in United Kingdom	8502896	38·6	4446	4543	53·9	22·0	35·7	2·11	0·13	0·33

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 30·34 in. The highest reading was 30·62 in. on Tuesday morning, and the lowest 30·09 in. at the end of the week.

* The figures for the English and Scottish towns (except for Nottingham, Salford, and Oldham) are the numbers enumerated in April, 1871, raised to the middle of 1879 by the addition of eight years and a quarter's increase, calculated at the rate which prevailed between 1861 and 1871. Revised estimates have been adopted for Nottingham, Salford, and Oldham, based upon special returns of inhabited houses existing within those boroughs. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

ABSTRACT OF A CLINICAL LECTURE ON SOME POINTS CONNECTED WITH THE OPERATION OF

RESECTION OF THE KNEE-JOINT AND ON FRACTURE OF THE BASE OF SKULL.

By THOMAS SMITH, F.R.C.S.,
Surgeon to St. Bartholomew's Hospital.

Mr. Smith said that he proposed to bring before the students on the present occasion three cases which would give them an opportunity of seeing the result of a very important operation—viz., resection of the knee—some time after it had been performed. He need scarcely say that resection of the knee had been thoroughly established to be a proper operation under proper circumstances, though twenty years ago many members of the profession maintained that it was unjustifiable; but still the question remained to be decided in the minds of some, what were the circumstances under which the operation should be performed. First of all, the operation consisted in the removal of the articular surface of the femur and the tibia; and in this country the patella also was removed, so that the femur was put in apposition to the tibia, and the two bones grew into one in a successful case. After that the patient walked with a straight leg.

It was pretty well decided that resection might be performed for any disease of the knee-joint which would otherwise necessitate amputation, if the whole disease could be removed; if a sufficient amount of the bone for locomotion could be left; and if the processes of the disease were not in an active state. They knew by experience, for instance, that if resection were applied to an inflamed joint it would be followed by great resentment, both locally and constitutionally. It might also be applied with success to certain cases of gunshot injuries. It was, moreover, a legitimate operation in cases of anchylosis of the knee in such a position as to render the knee-joint useless.

The three patients he was about to bring before them were all comparatively young, their ages being respectively twenty, eighteen, and sixteen. The first had had the operation performed about four years ago, the second ten years ago, and the third about five years ago. In the first case, W. T., aged twenty, about June, 1873, was seized with violent shivering, and an abscess formed in his left leg, near the knee. After being opened, other abscesses formed, and the knee gradually became fixed. In May, 1874, he was admitted into the hospital with anchylosis of the left knee-joint in semi-flexed position, there being absolutely no movement. Upon consultation the general opinion was that an attempt should be made under chloroform to straighten the limb, and if unsuccessful, amputation should be performed, as the lower end of the femur seemed diseased. He was then discharged at his own request, but re-admitted nine months afterwards. All the openings of the old abscesses were then firmly closed; but the knee was still fixed and quite useless. An attempt to break down adhesions having failed, excision of the knee was performed, two inches and a half of bone being removed. The bones were then put together, and they united firmly. When discharged, in December, 1875, he wore a thick boot and could walk well. As very often happened, a very good result was followed by the patient overtaxing the power of the limb; and in this case the patient took to the laborious occupation of a potman, necessitating his always being on his legs, and, in addition, the life he would thus lead would not be conducive to general health. He had also recently walked from Portsmouth to London in two days and a half, thus proving that he possessed a pretty strong limb. The operation, they would observe, was performed at a time when the process of ossification was nearly, though not quite, complete, and though two inches and a half of bone had been removed, upon measurement at the present time there was found to be no inconvenient shortening of the limb. The consequence of the great use of the limb was that it had become slightly bowed outwardly, and the patient complained of pain in it after he had been upon it for some time. He had been admitted to the hospital again, not on account of this, but on account of pulmonary phthisis.

The next case he would refer to was that of J. W., aged sixteen, first admitted in April, 1874, with chronic disease of right knee-joint, which commenced four years and a half before, after a fall followed by suppuration in the joint and in the neighbourhood of the joint. On admission, the right knee was globular; the general outline of the bones was completely lost, and the skin glazed. He complained of pain below patella, which was fixed. There appeared to be general thickening of soft and hard parts. Limb much flexed, with scarcely any movement; attempts at forced motion very painful. Tibia slightly displaced backwards. Leg everted and abducted. No sign of abscess. The limb was placed in a M'Intyre splint, and attempts were made to straighten it, but without success. On June 10 the operation of resection was performed. At that time the patient was eleven years of age, a tallish boy, and of course the growth of the bones was not complete. His general health was exceedingly feeble, but at the end of two years the bones were united by bony anchylosis and in good position. He then followed the avocation of haddock-curing, and could walk ten miles. In March last he came back to the hospital with the limb bent forwards with a general sweep from the femur to the foot forming an angle of about 45°—not only a bending at the seat of resection, but a bending of the shafts of the bones. About five weeks ago, after an ineffectual attempt to straighten the limb by force, osteotomy was performed, a chisel being driven in between the tibia and the femur, and the old resection broken down. The leg was then straightened and quite well.

The next case, of bending after resection, was a different one altogether. F. M., aged eighteen, was supposed to have fallen downstairs when a year and a half old, and to have injured his knee. He was admitted to the Children's Hospital with disease of the knee-joint, where about thirteen or fourteen years ago his knee was resected by the lecturer, but the particulars of that operation could not be found. This case illustrated one result of resection done in childhood. They could see from the appearance of the leg what had happened. The lower part of the leg and upper part of the thigh were shapely, and compared very fairly with the other leg in size, but directly they came to the centres of growth in the limb it was obvious that something had gone wrong. The growth had been completely arrested at the lower epiphysis of the femur and the upper epiphysis of the tibia. That, in all probability, was to be partly attributed to the disease, and partly to the operation having removed the principal seat of bone-growth. There was always the risk of that kind of thing occurring when resection was performed in children. The limb, in this case, though exceedingly short (seven inches and a half), was a perfectly strong one, and the patient could walk a dozen miles a day. This case contrasted with the first case, where the operation was performed when the growth of the bone was nearly complete. The bending of the leg in the other cases had taken place after the complete bony union of the femur with the tibia, but in this case he (the lecturer) thought that the bending outwards had taken place before the anchylosis was complete. What he proposed to do with this patient was to put the leg straight—that was to say, by inserting a chisel at the point of union between the femur and tibia, and performing subcutaneous osteotomy.

Now, the moral of these cases was, first, that good resections of the knee-joint might be overtaxed by their owners, and however firm the osseous anchylosis might be, the whole limb might bend; and that resection, if possible, should be performed in those cases where the whole process of growth and ossification of the limb was nearly complete; but still that this should not exclude the operation in the case of a younger patient, if by means of the operation amputation might be avoided.

The lecturer then called attention to a case where the base of the skull of an infant, thirteen months old, had been found, on post-mortem examination, to have been severely fractured by a fall from a bed; pointing out that there were no external marks of any kind to indicate the extensive injury that was found to have taken place, but that the only local symptom was a free escape of serous fluid from the right ear, which, on applying Professor Turner's test, was found to be cerebro-spinal fluid. It seemed almost inconceivable, from the appearances, that the skull could have been fractured, but the child gradually became insensible, then convulsed, and died four days after admission. In a case of that kind, of course, no treatment was likely to be

of any avail, but it was never well to give up a case as hopeless, as he had found it was always a great help to the patient dying if the surgeon once gave the case up. To illustrate this, he might mention that lately, in two cases of fractured base of the skull, the patients being in a semi-comatose condition, and about as bad as they could be, had rallied after the administration of a large dose of brandy (in one case as much as eight to ten ounces), and had ultimately recovered. It was difficult to hit the medium between starving a man to avoid inflammation, and not giving him sufficient to repair the injury he had sustained, but he would advise them to feel their way. In the cases he had mentioned the dose of brandy was administered to see what good it would do the patients, and it acted so well that they were ordered a more stimulating kind of food, with the best result.

ORIGINAL COMMUNICATIONS.

TRANSUDATIONS AND EXUDATIONS.

By ALEXANDER JAMES, M.D., F.R.C.P.E.,
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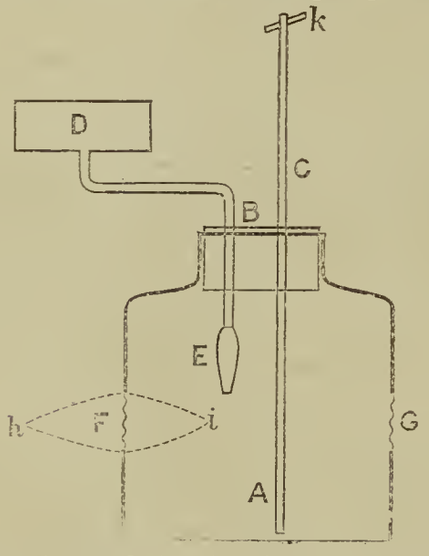
TRANSUDATIONS—*Continued.*

(*Concluded from page* 5.)

Abdominal Transudation.—This, as we have seen, is more concentrated than the subcutaneous, and less so than the pleural. When we look for an explanation of this we shall, I think, discover that we have in the abdomen processes at work similar in kind to those which we have studied in the thorax, but less in degree.

We can best understand this by the diagram—A is a jar into the stopper of which two tubes B and C are fitted; B communicates above with a reservoir of water D, and below with a membrane E through which water will readily filter; C is an open tube extending to within half an inch of the bottom of the jar A; F is an india-rubber diaphragm which can be



moved at will towards *h* or *i*; G is also a diaphragm which can be made rigid or flexible. Supposing now that the diaphragm F is placed as at *i*, and water poured into the reservoir D, it will filter into the jar A, and this filtration will continue till we have in tube C a column of water equal in height to level of that in reservoir D.

If now the diaphragm G be perfectly flexible, any movement of the diaphragm F to *h* will cause no alteration of the level of the column of water in tube C. If, on the other hand, this same movement be made when the diaphragm G is rigid, a diminution of pressure will be produced in the jar, and so the level of the column of water in C lowered. But if this lowering be prevented by clamping the tube C at *k*, the negative pressure thus produced will be expended in aspirating water through the filter into the jar A, so that when the diaphragm F is again placed at *i*, the clamp *k* having been previously removed, the column of water in C will rise higher than before. The extent to which this increase in rise will occur will depend, first, on the amount of force with which and distance to which the diaphragm F can be moved from *i* towards *h* and back again, and secondly, on the rigidity of the diaphragm G.

Supposing now that the jar A represents the abdominal cavity; the filter E is a capillary vessel containing blood at an abnormally high pressure; F is the diaphragm, and G the more or less flexible anterior abdominal wall,—we can readily understand how the expiratory ascent of the diaphragm due to the elastic recoil of the lungs will cause "aspiration" in the abdominal cavity, and how this aspiration may be diminished or completely abolished, either, in the first place, by anything which interferes with the movement of the diaphragm, as emphysema, etc., or secondly, which renders the anterior abdominal wall more flaccid, as repeated pregnancies.(a) Of course it will also be abolished in cases of large effusion.

In this aspiration, therefore, we have to recognise one reason for the greater concentration of the abdominal as compared with the subcutaneous transudation; and when we compare the cause of this aspiration in the abdominal cavity with that which produces it in the pleural, we can further understand why its concentration should not be so great as in the latter.

This abdominal aspiration I have endeavoured to estimate experimentally, and the simplest way of explaining the method which I followed is to say that I substituted the abdominal cavity of a rabbit for the *jar* figured in the diagram. This I did by fixing two metal tubes through the anterior abdominal wall, one tube communicating with a reservoir of water raised about two inches above the level of the animal's body, and the other communicating with a straight tube as at C. Having inflated the lungs so as to represent full inspiration, I allowed water to flow into the abdomen till it rose in the upright tube to the same level as that in the reservoir. Having then clamped this tube, I allowed the air to escape from the lungs. About three drachms of water at once ran into the abdominal cavity.(b)

In abdominal transudations we have also to recognise, as in the pleural, the existence of conditions favouring absorption. Here, again, we have a similar alternation of tension, the negative or positive tension of expiration followed by the less negative or more positive one of inspiration. Indeed, at first sight we might say that the conditions for absorption in the abdominal cavity are more favourable than in the thoracic, as the pressure in ascites often amounts to 6 in. or 7 in. water: (Hoppe-Seyler(c) mentions one of 25 mm. H.; Stone(d) gives as an average 5 in. to 7 in. of water); whilst in pleural transudation the pressure is negative.(e) But although great pressure will promote absorption, the experiments of Dybkowsky, previously referred to, demonstrate that an alternation of negative and positive tension is still more favourable.

It is important also to bear in mind that we have in ascites from cirrhotic liver conditions differing somewhat from those present when the fluid is due to renal or cardiac disease alone. In the latter class of cases, transudation will occur from both the portal and systemic vessels; in the former it will occur from the portal vessels alone, the (blood) pressure in the systemic capillaries and absorbents remaining normal, or perhaps being even slightly diminished. This will certainly have the effect of greatly promoting the absorption of the watery part of the transudation. We must further remember that, in cirrhosis of the liver, the greater the pressure in the portal system, the more rapidly will anastomoses form between its branches and those of the systemic circulation; and when this is established, not only will the fluid already transuded be still more rapidly absorbed, but by the free passage of portal blood into the systemic vessels further transudation will be completely prevented. I cannot here refrain from calling attention to the harm which may certainly be done by the ordinary text-book treatment of "keeping the bowels freely open" in such cases. No one

(a) Compare Matthews Duncan on the "Retentive Power of the Abdomen,"—"Researches on Obstetrics," page 309.

(b) These considerations seem to show that this abdominal aspiration will occur during expiration alone. In connexion with it, however, it is interesting to note that Professor Mosso, of Turin, in a paper "Ueber die Gegenseitigen Beziehungen der Banch und Brustathmung," in the *Archiv für Anatomie und Physiologie* (His, Braune, and Du Bois-Reymond) for 1878, found that during sleep there was, coincident with the first part of the inspiratory act, a drawing in of the abdominal walls. This will represent a tendency to an aspiratory act. Matthews Duncan considers that the retentive power exists during both inspiration and expiration.

(c) *Virchow's Archiv*, ix., page 248.

(d) *Lancet*, August 23.

(e) See "Pneumono-Dynamics," by G. M. Garland, M.D. New York.

can practise medicine for any time without being made sensible of the great immediate benefit which patients with portal obstruction due to cirrhosis experience as the direct result of the relief of the congestion of the portal capillaries; but the fact that with the advocacy of this plan of treatment little or no reference is made to its influence on the ultimate progress of the case, seems to be an example more than usually flagrant of the harm which results from the readiness with which mankind considers himself perfectly competent to improve upon nature, without considering it at all necessary to have in the first place obtained anything like an interpretation of her phenomena.

The *cerebral transudation* occupies, as regards concentration, a place between the abdominal and subcutaneous. About it I have little more to say than that, when we remember the unyielding osseous case which contains the brain, and the almost complete incompressibility alike of blood, ventricular fluid, and cerebral substance (the changes in volume which this last undergoes being insignificant even with a pressure of 180 mm. Hg), we fail to find the existence of conditions similar in any way to those which we have noted in the thorax and abdomen.

The fluid found in the cerebral ventricles in Bright's disease, etc., is probably an increase of secretion rather than a transudation. Schmidt says, "Die krankhafte Transudation durch die Himcapillaren ist als reine quantitive Steigerung der normalen (Cerebrospinalflussigkeit) zu betrachten"; and in connexion with this he points out that, whilst the proportion of salts is the same as that found in the other transudations, yet when these salts are examined it is found that there is in them an increase in the relative proportions of potash and phosphates to soda and chlorides.

Exudations.

Those which I have studied are the contents of abscesses, inflamed bursæ, and inflamed joints, and the results I have summarised in the table.

In each case I have estimated the following points:—Duration of the affection; amount of fluid; its tension; specific gravity; per cent. of solids; per cent. of ash. In the last column I have added explanatory remarks, etc. Before we examine these in detail, let me describe the means by which the *tensions* were obtained, these being the only data of the means of estimating which a detailed account is necessary. This was done by introducing into the abscess cavity the largest-sized trocar and canula of a Potain's aspirator. To the branch tube of the canula a piece of glass tubing of small calibre, and containing a few drops of carbolic solution, was connected. On withdrawing the trocar and closing the tap, the fluid rose in the tube, and care being taken to keep this perpendicular, the height to which the column of water rose was measured off, and so the pressure was obtained,

I am well aware that this is not at all an accurate method, and that the smaller the collection of fluid, the tension of which is to be tested, the greater will be the deviation from the real tension. On the other hand, I am not aware of any means by which absolutely accurate results could be obtained in all cases,(f) and I believe that by the simple method which I have employed, and by making due allowances, we can obtain results sufficiently trustworthy for our purpose, *i.e.*, we can say whether a pressure is high or low. Another source of error is that the rise in the tube may be prevented by flakes of lymph, or impeded by the viscidity or thickness of the fluid. This must also be noted and allowed for.

Let us now examine our results, and endeavour to find if we can detect any relationship between them.

First, we might expect that the tension will vary directly with the acuteness of the process, and *vice versâ*. A reference to the table will show that, although a relationship of this kind does exist, yet it is not very well marked. For this there are obviously various reasons—*e.g.*, one abscess may be situated in lax tissues, and another in dense; a chronic abscess may have become acute, or an acute chronic, etc.

Secondly, according to the hydrostatic law, the tension in small abscesses, etc., should be greater than in large ones, in order that their distension should occur. Here also the relationship is not well marked, owing to the fact that the abscesses have not the same degree of acuteness, and that they are not in tissues of the same density.

(f) *e.g.*, How could the tension be obtained in a *whitlow*? I have, however, devised an apparatus by which I hope to obtain better results.

Table.

Those within brackets are abscesses which were re-tapped.

	Duration.	Quantity.	Tension.	Sp. gr.	Solids.	Ash.	
			inch		per cent.		
1	3½ mo.	4½ oz.	7	1024·8	9·76	·6	Abscess of back; laudable pus.
2	9 days	2 „	5½	1024·3	8·5	...	Pus on standing twenty-four hours, one-fourth liq. puris.
3	6 „	1¼ „	5	1023·5	8·1	...	Pus on standing twenty-four hours, one-half liq. puris.
4	6 „	25 „	15	1030·5	11·24	·7	Abscess of thigh; laudable pus.
5	2½ mo.	10 „	5½	1029·2	9·8	·7	Abscess on gluteal region
6	3 wks.	2 „	7	1018·2	6·3	·7	Inflamed bursa over elbow; clear yellow fluid.
7	3 „	1 „	6	1024·9	9·3	...	Strumous abscess of neck.
8	1 mo.(?)	10 „	3	1034·0	11·8	·84	Abscess of shoulder-joint; bone; had been opened one year previously.
9	10 wks.	12 „	6	1025·0	9·5	·7	Abscess on hip after scarlatina.
10	6 „	1 dr.	7½	...	10·3	·7	Abscess on back.
11	5 days	3 „	...	1022·5	7·5	·7	Clear yellow fluid.
12	5 „	2½ „	3	...	7·0	·6	Clear yellow fluid.
13	11 „	3½ „	3½	...	...	...	Turbid fluid, depositing pus corpuscles.
14	2 wks.	2 oz.	10	1022	7·2	·6	Inflamed knee-joint; fluid glairy, and slight deposit of pus corpuscles on standing.
15	2 „	10 drs.	8*	1035·3	13·5	·8	Abscess on lower part of chest; pus very viscid, clotted in tube.*
16	5 days	1 oz.	12	1033·5	12·3	·7	Pus not so viscid.
17	5 „	6 drs.	10½	1033·5	12·07	...	Pus not so viscid.
18	7 „	3 „	9	...	7·9	·6	Housemaid's-knee; yellow fluid; slight deposit of pus corpuscles on standing.
19	1 mo.	1 oz.	5½*	1031·3	10·0	...	Abscess of glands of neck; skin reddened, and *slight oozing*.*
20	1 year	1 dr.	0	...	6·0	...	Knee-joint; gelatinous degeneration; small amount of fluid.
21	6 days	3 drs.	5*	1033	12·5	·7	Abscess of thigh; pus thick, clotted in tube.*
22	2 wks.	9 „	5	1025	9·4	·7	Abscess on upper arm; fluid, laudable pus.
23	4 „	15 oz.	6	1026·4	9·6	·7	Abscess of thigh; fluid, laudable pus.
24	3 mo.	4 „	3	1022·0	7·8	·7	Abscess over tibia; pus thin, containing flaky matter.

Thirdly, can we trace a connexion between the tension and the composition of the fluid? On this point more definite results are, I think, obtainable. As regards the mineral matter, a glance shows that its proportion remains fairly constant—about ·7 per cent. This is, of course, just what we might expect. The organic matter, however, requires more detailed consideration. What is the effect of pressure on a secretion, supposing that pus is such?

We know in the case of the kidney that, if to the secretion of urine a counter-pressure be applied—as occurs, for example, in the case of a calculus in the ureter—the secreted urine becomes more and more watery. We should, therefore, on this supposition, expect that with high tensions the contained fluids will be correspondingly deficient in solids.

To obtain information on this point from the table we must, however, be sure that we are dealing with fluids identical in character; and that these will vary, if from different sources, is evident. Of this, Nos. 6, 14, 18, and 20 are, perhaps, the best examples. These fluids are thin, being made up to a large extent of slightly altered bursal or joint secretion. On the other hand, pus derived from abscesses containing portions of sloughed tissue will be comparatively thick in composition. Bearing this in mind, and looking, therefore, at what we may call the true abscesses, we cannot, I think, fail to discover that the opposite of what we might have expected holds—viz., that high tensions are associated with thick pus. Thus, in Case 4, a tension of 15 in. is associated with pus containing 11·24 per cent. solid residue; in Case 10, a tension of 7½ in. (certainly too low an estimate, there being only 1 oz. of pus), with 10·35 solids; in Case 15, a tension of 8 in. (too low, the abscess being small and the pus extremely viscid), with 13·5 per cent. solids; Cases 16 and

19, re-tappings of the last, where, with tensions of 11 in. and 10½ in. (the pus being much less viscid), there was 12·3 and 12·07 per cent. solids; in Case 19, with a tension of 5½ in., there was 10 per cent. solids, but here there had been some oozing, which indicated that a higher tension had existed; in Case 21, with 12·5 solids per cent., the fluid rose only 5 in., but here the quantity was very small, only three drachms, and the pus was found afterwards to have clotted in the tube.

How does this occur? On the supposition that pus is a secretion, the explanation would be that with high tension, although the pus may be more watery where secreted, yet a correspondingly large proportion of the water is squeezed out, leaving the corpuscles and thickened *liquor puris*; and it might be further suggested that the watery portion thus made to filter out is an important factor in the production of the œdema, which can often be detected like a ring surrounding an abscess-cavity. But it may be argued we cannot assume that the process of pus-formation in the case of abscesses is similar to that of a normal secretion. In the latter we have a distinct apparatus for the purpose—viz., a membrane having on the one side secreting-cells, and on the other bloodvessels,—and the secretion is the result of the elaborating action of the cells on the blood. In abscesses, on the other hand, the pus-formation and increase in size are mainly due to the breaking-down of the surrounding tissues, and consequent addition of pus corpuscle and leucocytes.

On this hypothesis the association of thick pus with high tension may be explained by supposing that, in cases of high tension, the tissues immediately surrounding the abscess will be devoid of serum, etc., as the direct result of pressure, and consequently that when they break down there will result a pus containing a very small comparative amount of liquor puris.

When we reflect, moreover, on what physiology has demonstrated to us in connexion with the influence of the nervous system on secretion, *e.g.*, the watery "chorda" saliva and the thick viscid fluid which results from sympathetic stimulation, we might be tempted to theorise further. As my subject, however, is the consideration of physical processes, and not that of pus-formation, I shall refrain.

But since high tension is associated with thick pus, does the converse hold? Is thin fluid associated with low tension? A reference to the table will show that—excluding Cases 6, 14, and 18 for reasons before mentioned, and Case 8 for a reason to be given immediately—this association does exist. The reason why in Case 8 there was found thick pus with low tension appears to me to be that, although there has been no active secretion of pus to produce a high tension, yet, owing to the long duration of the abscess, a proportionately great absorption of its fluid part has occurred.(g)

The effects of repeated tappings are also very interesting. As observations 1, 2, and 3, 10, 11, and 12, 14, 15, and 16 show, there is diminution alike in the quantities, tensions, and amounts of solid constituents. How does this occur? The explanation seems to be, that the pus having been drawn off, there occurs an effusion of serum more or less mingled with pus corpuscles into the cavity. At the same time this cavity is rapidly contracting, so that by this process, and by the collection of serous fluid, etc., there is in a very short time a considerable amount of tension established. This tension will of itself act as an irritant; it will cause an increased secretion of pus corpuscles, which, by increasing still further the tension, will squeeze out the watery portion, leaving within a fluid with a larger proportion of corpuscles. Thus, in Cases 2 and 3, 11 and 12, 14 and 15, we find an ever-decreasing tension and proportion of solids, but in 13, where a longer period was allowed to elapse than between the previous tappings, we find the tension higher, and (although the fluid obtained was too small in quantity to admit of more accurate analysis) containing a much larger proportion of corpuscles.

We may further be allowed to suppose that this same process of secretion of pus corpuscles, consequent increased tension and squeezing out of the watery portion, will go far to explain how the fluid found in inflamed joints, bursæ, pleurisy, etc., becomes in certain circumstances transformed into pus.

Remembering that tension is an irritant, I cannot refrain from suggesting that in this fact we have a simple explanation of what otherwise seems puzzling. For instance, how is it that we sometimes find abscesses to form, increase rapidly in size, and then, after no treatment, or perhaps only the application of a poultice, or allowing a few drops of pus to escape, gradually to diminish and disappear?

From the above considerations the following may be regarded as a description of the process:—Suppose that, as the result of a bruise, a small portion of tissue in the deeper subcutaneous layer loses its vitality, it will at once act as an irritant, causing the collection around it of leucocytes or pus corpuscles. By this, tension will be produced, the irritation of which will of itself greatly increase the formation of pus. While this is going on, however, the portion of sloughed tissue will be breaking down into *débris*, so that as an irritant it will be gradually becoming less powerful, until it ceases altogether to act as such. The tension, however, will still continue to stimulate pus-formation, but it will be remembered that the larger the abscess becomes, the less (according to the hydrostatic law) is the pressure required to distend it. Gradually, therefore, the irritation of tension will be diminishing, the secretion of pus corpuscles will therefore become less and less until the absorption of the fluid part of the secretion, which always occurs to a greater or less extent, is sufficient to abolish tension entirely. In this way no further formation of pus will occur, and absorption going on, the abscess will disappear. It will be easily understood how the escape of a few drops of pus, at the time when the tension is reaching its minimum, will hasten the process.

In connexion, further, with the relationship between the tension and the composition of the fluid, which I have been endeavouring to demonstrate, the following considerations are of interest:—

In the fluid of *acute hydrocephalus* there is always a larger proportion of solids than in the chronic disease.

In the *liquor amnii* there is a larger proportion of solid constituents in the early than in the later months of pregnancy.

In such tumours as *wens* the contents are much more solid when the tumours are small than when they are large.

Conclusions.

1. The pleural and peritoneal transudations have a large proportionate amount of solid constituents, because in these cavities there exist physical conditions which favour (1) the transudation of fluid into them, and (2) the absorption of the fluid so transuded.

2. In the pleural cavity the above conditions are most favourable.

3. When, as the result of an abnormal composition of the blood or of increased pressure in the vessels, there occurs transudation of fluid through the lung capillaries into the lung tissue, the *inspiratory act* will favour the passage of the fluid so transuded into the pleural cavity when the air-passages are free (hydrothorax), but into the air-passages themselves when the entrance of air into the lungs is prevented (œdema of the lungs).

4. Cerebral transudation should be regarded rather as an increased secretion (Schmidt).

5. In exudations there is a relationship between the tension and the composition of the fluid; the higher the tension, the thicker the fluid.

6. This is probably due to two conditions—(1) that in high tension a much larger proportionate amount of the watery part of the fluid is driven out into the surrounding tissues; and (2) that the tension itself acts as an irritant.

7. In abscesses of long standing the association of low tension with thick pus may be explained as being due to absorption of the watery part of the pus.

(g) This will explain the association of thick pus with low tension in so-called "cold" abscesses.

Increase of Phthisis in Southern Latitudes.—Attention has heretofore been called to the fact that there has been a steady increase of deaths from phthisis among the natives of the Madeira Islands, and in Naples, Florida, and other health-resorts. It now appears that the same thing is happening in New Orleans, and the mortality has recently been so great that attention has been called to the fact by the local press. It is thought that the increase is only in part due to visitors coming south for their health.—*Philadelphia Med. and Surg. Reporter.*

OBSERVATIONS ON YAWS.

(A REPLY TO DR. GAVIN MILROY.)

By H. A. ALFORD NICHOLLS, M.D., C.M. Aber., M.R.C.S.,
Medical Superintendent of the Dominica Yaws Hospitals,
Surgeon to the Roseau Infirmary.

(*Concluded from page* 7).

I NOW come to consider the opinion expressed by Dr. Milroy as to the non-contagion of Yaws. In dealing with the subject I shall have to write at some length, for on the acceptance or dismissal of the non-contagion theory—it is a theory, and nothing more—rest questions of vital importance to the well-being of great numbers of the peasantry of Dominica, and of the West Indies generally.

Dr. Milroy says (paragraph 2)—"Although Yaws appear to be, under certain conditions, contagious or communicable to healthy persons by contact with the diseased, it has always seemed to me very problematical whether contagion is the chief or sole cause of the extension or propagation of the malady among a community; at best, the idea must still be regarded as only an unverified hypothesis." Again (paragraph 5) he says—"If it be proved that the disease is liable at times to become developed independently of contagion, it is obvious that it will be in vain to look for its extinction in a community by means, however stringent, of mere isolation or segregation of the affected from the rest of the inhabitants." In bringing forward his views Dr. Milroy altogether ignores the writings of past and present authorities on the disease, as will be seen from paragraph 3 of his letter; and he endeavours to support his opinion by referring to his own experience when visiting these colonies a few years ago, and by bringing forward certain statements of Dr. Crane, who says, amongst other things, that cases of Yaws are admitted into the public institutions of Trinidad with no ill effects. Dr. Crane may be, as Dr. Milroy says he is, one of the ablest practitioners in the West Indies, but he can lay no claim to be considered an authority on Yaws. In reply to question 9, put to him by Dr. Milroy, as to the development of the disease, Dr. Crane says, "The origin of the disease in particular cases has not been investigated with sufficient care to say how it has arisen." This clearly shows that Dr. Crane has not given any attention to the matter himself, and that he is unacquainted with the writings of authorities on the disease.

As regards the unrestricted admission of persons suffering from Yaws into the medical institutions of Trinidad, I can give some information which possibly is unknown to Drs. Milroy and Crane. A short time ago I spent a month in Trinidad, and I made during my stay in the island special inquiries into the prevalence and spread of Yaws, and I had conversations on the subject with many of the medical men. Dr. Espinet, for many years the Medical Officer of the Leper Asylum, informed me that a case of Yaws had once been admitted, and that the disease spread by contagion to several of the inmates. From my inquiries, which were carefully conducted, I came to the conclusion that Yaws was spreading in Trinidad to a much greater extent than was generally supposed. When I was at the islands of the Bocas, between Trinidad and Venezuela, the two boatmen who rowed me into the Boca Monos were both afflicted with Yaws; and Mr. Morrison, the revenue officer, informed me that there were many cases of the disease in these small islands, as well as in the contiguous portion of Trinidad.

Dr. Milroy brings forward his experience in the West Indies in support of the non-contagious theory, but I fail to find in his printed Report any reference to a single case in which he himself investigated the origin of the disease. He culled the experience of the resident medical men; and their opinions, which are given at length in Dr. Milroy's Report, show a large balance on the side of contagion.

In paragraph 3 of his letter, Dr. Milroy says—"Much patient and unbiassed personal investigation by resident medical practitioners has yet to be made before we shall have an exact and logical account of the natural history of Yaws and of its attributes in all their bearings." It is singular that Dr. Milroy should altogether pass over the writings of the many able and eminent men who have recorded their experience of the malady at various times from the middle of the last century to the present day. The works of most of these men I find to be excellent examples of exactness and logical reasoning; and to judge them to have conducted their investigations with impatience and bias will be seen to be an injustice to honoured names by the impartial perusal of their writings.

I now give the opinions of these men on the contagiousness of Yaws:—

Dr. Hillary says—"This disease is known to be infectious, but there is also a peculiar aptitude in some constitutions to receive it more readily than in others, and probably in the same person to receive the infection more readily at one time than at another time, as is also observed in small-pox."(a)

Dr. James Grainger says—"As the Yaws are highly infectious, a house should be provided for the diseased."(b)

Dr. John Williams says—"The Yaws is a disease of such a contagious nature, that white people naturally feel a horror in exposing themselves to the risk of infection."(c)

Dr. Thomas Bateman says—"The Frambœsia is propagated solely by contagion of the matter discharged from the eruption, when it is applied to the wounded or broken skin of another person, who has not previously undergone the disease."(d)

Dr. Robert Thomas says—"It never spreads by miasma floating in the air, but may be quickly propagated by cohabiting or otherwise coming in contact with such as are affected by it. It may likewise be communicated by the application of matter from a Yaw pustule or sore to a wound in a person who has not before had the disease."(e)

Dr. Mason Good says—"In attempting the cure of the disease, the first step should consist in separating the patient from his associates, to whom he will otherwise assuredly communicate it by contagion."(f)

Dr. William Wright says—"There is no other mode of communicating the Yaws but by inoculation, or the application of the ichor from the sores of the infected to the wounds, ulcers, or excoriations of people otherwise in health. Some will resist the action of variolous contagion even by inoculation; but no habit, age, sex, or country is proof against the contagion of the Yaws once in a lifetime."(g)

Dr. Levacher says—"As we have already observed in effect, the Yaws are not contracted a second time after having been once cured by severe treatment; but, contagious in a high degree in their primary stages, the least contact is then sufficient for their transmission."(h)

Dr. Kerr says—"It is the peculiarity of Yaws in the human species to be propagated only by contagion."(i)

Dr. Rayer says—"This disease is *contagious*, and it is transmitted by the union of the sexes, by suckling, or by the application of the matter proceeding from the pustules or the cutaneous ulcers to an excoriated portion of the skin, and perhaps by other means."(k)

Dr. David Craigie says—"It is contagious, and it cannot be communicated in any other mode than by actual contact of yawey matter to an exposed surface of the corion. If applied to the unbroken cuticle, no effect follows; but if it be either forced through that membrane, or touch the slighest abraded point, the eruption is sure to follow."(l)

Dr. George Gregory says—"The Yaws arise from a specific contagion, the latent period of which is said to extend to the unusual length of seven weeks. It may be propagated by inoculation, but the disease is not thereby rendered milder or shorter."(m)

(a) "Observations on the Changes of the Air and the Concomitant Epidemical Diseases in the Island of Barbadoes." London, 1766.
(b) "An Essay on the more Common West India Diseases." Edinburgh, 1812.
(c) "Medical and Miscellaneous Observations relative to the West India Islands." Edinburgh, 1817.
(d) "A Practical Synopsis of Cutaneous Diseases," fourth edition. London, 1817.
(e) "The Modern Practice of Physic," seventh edition. London, 1821.
(f) "The Study of Medicine," second edition. London, 1825.
(g) "Selection of Dr. Wright's Papers on Medical and Botanical Subjects." Edinburgh, 1828.
(h) "En effet, les pians guéris une première fois par un traitement sevère, ne se contractent plus, comme nous en avons déjà fait l'observation; mais eminemment contagieux dans les conditions primitives, le moindre contact peut alors suffire pour leur transmission."—"Guide Médical des Antilles." Paris, 1834.
(i) Article on "Yaws," in "The Cyclopædia of Practical Medicine." London, 1835.
(k) "Cette maladie est *contagieuse*, et se transmet par le rapprochement des sexes, par l'allaitement, ou par l'application de la matière provenant des pustules ou des ulcères cutanés sur une portion excoriée de la peau, et peut-être par d'autres voies."—Article on "Yaws et Pian," in "Dictionnaire de Médecine et de Chirurgie Pratiques." Paris, 1836.
(l) "Elements of the Practice of Physic." Edinburgh, 1836.
(m) "Elements of the Theory and Practice of Medicine," fifth edition. London, 1839.

M. Cazenave says—"Yaws appears to be a contagious malady; it is communicated through the matter discharged from the tubercles."(n)

Dr. John Imray, quoted by Dr. Tilbury Fox, who says—"Dr. Imray speaks positively of the disease being conveyed from person to person by contact, or by the absorption of the poison through some abraded surface."(o)

Dr. Bowerbank is quoted as follows by Dr. Fox:—"Dr. Bowerbank" . . . . "does not believe that the disease can be taken except through positive contact of the healthy with the diseased."(p)

Dr. Paton Watt says—"There can be no doubt, however, that the disease is a contagious one, not operating through the atmosphere, but, like vaccine virus, only by direct contact with an excoriated or wounded surface."(q)

Dr. Horton says—"Yaws is a contagious disease; it is sometimes epidemically current in places where it is endemic, affecting whole families. The disease is communicable by the sanious fluid which it discharges."(r)

Dr. Balmanno Squire says—"It is propagated by contagion of the matter discharged from the eruption; it is therefore inoculable."(s)

This list might be considerably increased, but it is already quite sufficient to push on one side the theory propounded by Dr. Milroy. That, in the face of these opinions recorded by so many able men, both English and French, a physician of Dr. Milroy's position should say that the idea of contagion at best "must still be regarded as only an unverified hypothesis," is, to say the least of it, surprising.

I find those men who have most experience of the disease in the present day pronouncing it to be contagious. In British Guiana, Dr. Paton Watt; in Trinidad, Drs. de Verteuil and Espinet; in Grenada, Dr. Orgias; in Jamaica, Dr. Bowerbank; in Western Africa, Dr. Horton; and in Dominica, where there is the greatest opportunity of studying the disease, the whole medical staff declare the malady to be propagated by contagion. These important facts, together with the recorded opinions of the long list of medical men to which I have referred at length, and the histories of cases given in my last Report, must be all swept away before any unbiassed scientific mind can accept the theory propounded by Dr. Milroy. But, quietly to ignore this enormous mass of weighty evidence, and to declare in an *ex cathedrâ* manner that contagion in Yaws is at best "an unverified hypothesis" (whatever that may be), is certainly not scientific.

The subject of Yaws is just now of vital importance to several of the West Indian colonies; in this government the ravages committed by the disease in Dominica is one of the most important questions of the day. In Trinidad, according to the views of those medical men who, by a long residence in the island, must be best acquainted with the condition of the people, the disease is spreading. In Grenada, where there is a special Yaws Hospital, Dr. Orgias—the principal medical officer—told me a short time ago, when I accompanied him in his official visit to the medical establishments, that the malady was spreading in the island by contagion.

If the views of Dr. Milroy be accepted as true, then has all the expenditure for the special treatment of Yaws in this island been totally unnecessary, and it would be wrong to continue any longer to burden an impoverished community by extra taxation for keeping the Yaws Hospitals working. But, if Dr. Milroy's hypothesis be conceived in error, the closing of the Hospitals would be a calamity to the country, for by their work they have nearly effected a riddance of Yaws from districts of the island which were pest-holes of the disease. To sweep away the Yaws Administration would be to allow the malady to take its own course; and what that course has been in the past, the history of the last few years conclusively shows.

(n) "Manual of Diseases of the Skin, from the French of MM. Cazenave and Schedel," by Dr. Thomas Burgess. London, 1842.

(o) "Skin Diseases," by Dr. Tilbury Fox. London, 1873.

(p) *Ibid.* The views of Drs. Imray and Bowerbank, who are now the principal authorities on Yaws, will be found at length in Dr. Milroy's "Report on Leprosy and Yaws in the West Indies"; and references to their opinions are made in a work edited by Drs. Tilbury Fox and Farquhar, and published in 1876 under the sanction of the Secretary of State for India.

(q) "Report on the Prevalence of Yaws," addressed by the Medical Officer of the Immigration Department of British Guiana (Dr. Watt) to Governor Longdon, July 16, 1874.

(r) "The Diseases of Tropical Climates," second edition. London, 1879.

(s) Article on Cutaneous Diseases in Dr. Reynolds' "System of Medicine," vol. v. London, 1879.

Dr. Milroy gives his sanction to mixing Yaws patients with other cases in general hospitals. In this island, where the disease is better known than in most places, such a proposal would be looked upon with horror, and it would be considered a cruel thing to place the other inmates of a hospital in such a position as that they might become affected with a most loathsome malady.

The whole question is one of the greatest importance to those countries where the disease exists; and, as Dr. Milroy is considered to be an authority on the subject, I have given the opinions of writers on Yaws at length, in the hope that attention may be thereby directed to a matter of so much interest. Snould general credence be given to Dr. Milroy's views, a mistaken idea will be formed by medical men of a curious disease, which, in spite of all that has been written on the subject, is still much misunderstood by authorities in Europe. That Dr. Milroy's theories will in the end find general acceptance, I do not believe for a moment, for his views are even now at variance with the views of those who have most knowledge of the disease.

Dominica, W. I.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

CHARING-CROSS HOSPITAL.

A CASE OF TYPHOID FEVER FOLLOWED BY CANCRUM ORIS—DEATH.

(Under the care of Dr. GREEN.)

James K., aged nine years, was admitted on November 30, 1878. About ten days before he had returned home from school complaining of feeling ill and of headache. Next day he had remained in the same condition, and had also some cough. After treatment by a local medical man without any improvement, patient was brought to the hospital. He had had no diarrhœa, and no other persons living in the same house had been ill.

On admission there were found to be a few characteristic typhoid spots on the abdomen and lower part of the chest. His temperature in the morning was 102·2°; in the evening 101°. During the day he had several motions, and there was little difficulty in identifying the case as one of typhoid, but the symptoms were not such as to indicate a severe attack, and there was not any special want of strength.

December 9.—The case has presented the ordinary features of typhoid, the temperature varying from 100·5° to 103°. This morning it has risen to 103·2°, and patient is very weak. He has been ordered to take two drachms of brandy every four hours.

11th.—Last night patient's temperature reached 104·2°, but it is falling to-day. During this day the bowels have been open nine times. A starch enema was administered, and afterwards a mixture of bismuth and eight minims of tincture of opium were given.

13th.—This morning the temperature was 104·5°, in the evening it had fallen to 102·6°. Patient has been very weak, and the diarrhœa continues. Seven minims of tincture of opium were given twice to-day, and five drachms of brandy have been ordered every two hours.

14th.—Morning temperature 104·2°, evening 100·2°; pulse 150, weak. The diarrhœa continues, and an acetate of lead mixture and an enema containing opium have been ordered. Milk and beef-tea are being given every half-hour.

16th.—Temperature last night 103·6°, this morning 101·8°. The bowels were open ten times yesterday, seven times to-day. The opiate enema has been repeated.

18th.—Diarrhœa has been checked, there having been only five motions yesterday. Temperature this morning 101·4°. Patient is very much reduced in strength, and to-day there has been noticed in the mucous membrane of the left cheek a small unhealthy-looking ulcer.

20th.—The ulcer mentioned is spreading fast, and has the aspect of cancrum oris. Last night the temperature reached 103·4°, this morning it is 100·6°. The diarrhœa has ceased. Terebene is being used as a local dressing and as an antiseptic.

21st.—At 1 a.m. patient was apparently in a sinking

condition—the pulse was 160,—and half an ounce of brandy was ordered every hour. Afterwards patient rallied a little. Temperature 100·6° during the day. The ulcer of the cheek is spreading.

27th.—Temperature has been fluctuating irregularly from 103° to 99°. The ulcer has been slowly extending, and the lower jaw is now exposed. Patient is extremely weak. A mixture containing quinine, chlorate of potash, and hydrochloric acid has been ordered.

From this date the history is one of gradual exhaustion and of extension of the cancrum oris. The treatment of the ulcer was under the care of Mr. Barwell, who applied chloride of zinc paste, but the ulcerating process went steadily on—first the lower jaw, and afterwards the upper, being almost entirely exposed by the destruction of the soft tissues. Patient died on January 10, this being about fifty-one days from the appearance of typhoid symptoms. For a few days before death there was a return of the diarrhœa.

At the post-mortem examination the body generally was much emaciated. As noted during life, there was complete loss of the soft tissues covering the lower and the upper jaws, the denuded patch being circular in shape, and extending from the left angle of the mouth nearly to the angle of the jaw and to the malar bone above. There was also an appearance of the commencement of a similar patch over the left temple, where the parts were of a dirty black colour. The internal solid viscera were all bloodless, but normal in structure. In the colon, about six inches from the ileo-cæcal valve, there were traces of ulceration of the mucous membrane. In the ileum, for twenty-four inches above the valve, there were numerous tracts of very marked hyperæmia, but there was no recent ulceration, and no indication that ulceration had been present at any time to any great extent.

MIDDLESEX HOSPITAL.

A CASE OF ABSCESS IN THE ABDOMINAL WALL SIMULATING INTESTINAL OBSTRUCTION.

(Under the care of Dr. THOMPSON, late Senior Physician to the Hospital.)

[Reported by DAVID W. FINLAY, M.D., Medical Registrar.]

THE following case is interesting and instructive as presenting some of the difficulties which beset the diagnosis of real or apparent intestinal obstruction. Such momentous issues hang upon correctness of diagnosis in these cases that it seems a duty to place on record all that tends to the elucidation of the subject.

Edward V., aged seventeen, by occupation a worsted-winder, was admitted into the Middlesex Hospital on April 22, 1879. For the last seven years he had suffered from psoriasis, but had been otherwise healthy, and his family history seemed unimpeachable.

On the 17th, immediately after dinner, and while at work, he was seized with severe shooting and darting pains all over the abdomen, these being most severe in the region of the right hypochondrium. He remained at work, but on getting home in the evening the pain became worse; pressure seemed rather to increase than diminish it. He also found that lying on the right side increased the pain. Next day he went to work, but on reaching home in the evening he vomited several times. His bowels had been confined since the commencement of the attack, and since Saturday (the 19th) he had taken no solid food.

On admission, his temperature was 103·2°; pulse 120; respirations 40. He is a rather under-sized lad for his age; fairly nourished, and with a good colour. On both legs, thighs, and arms on their extensor aspects are large patches of psoriasis which he has had for years. He complains of pain and excessive tenderness in the epigastric region, where a well-defined tumour is seen, of a sausage-like shape, occupying the lower part of the epigastrium and stretching across nearly from one hypochondrium to the other. It is dull on percussion and has a semi-elastic feel. The tenderness on palpation is excessive, but there is no tenderness or pain in any other part of the abdomen. There is no redness or œdema of the skin over the tumour. Abdominal respiration is almost abolished. The tongue is dry in the centre and coated at the sides. There has been no passage of the bowels since the 17th, nor sickness since the 20th—five days and two days respectively before admission.

At midnight his temperature was 104·4°.

Next morning (8 a.m.) his temperature was 100·8°, pulse 102, respirations 24. His bowels had not been opened during the night, he had no sickness, and he passed no urine. The abdominal swelling seemed slightly more prominent; his tongue was dry and brown in the centre, but his appetite was fair, and his face had no expression of anxiety or pain. The rectum was explored, and found to contain fæces. For this condition an oil enema was administered, which returned immediately. In view of the probability that the case was one of intussusception, it was decided, after consultation with several members of the staff, to put the patient under the influence of chloroform, in order that, if a more complete examination than seemed possible without it (owing to the tenderness of the tumour) should establish this diagnosis, the abdomen might be opened and the invagination reduced. He was accordingly anæsthetised, and a large enema was administered. This was very soon returned, accompanied by a small quantity of fæcal matter, the appearance of the tumour being unchanged. In a few minutes afterwards his bowels were slightly opened, and he passed some flatus. This was deemed conclusive against any surgical interference, and it was decided to persevere with the enema treatment. Accordingly, another large enema was administered, which was retained for a short time, and brought away with it some solid fæces. At 6 p.m. his temperature was 98°, and he had been three times sick, the vomited matters being of a greenish colour. At 7 p.m. he was asleep. At 10 p.m. he was again sick, and brought up a lumbricus about seven inches long. Temperature then was 97·8°; pulse 102.

April 24.—At 2 a.m. temperature was 101·8°; at 6 a.m. 102°. At 10 a.m. temperature was 99·2°, pulse 84. He had slept well during the night, but vomited several times this morning, the character of the vomit being the same as formerly. The tumour is still well defined, but it is now limited to the right side of the epigastrium. There is scarcely any dulness to the left of the median line. There is no pain now over the swelling, and almost no tenderness on palpation. Bowels not opened during the night. At 11 a.m. another enema was given; and at 2 p.m. another round worm was vomited. At 4 he had another enema containing santonin; and after this he was frequently sick during the course of the evening. His temperature at 10 p.m. was 98·6°.

25th.—At 10 a.m. temperature was 100·4°; pulse 84. Tongue moist but coated. Abdominal tumour rather more tender, but otherwise unchanged. The bowels have been opened, and some fæcal matter has come away. At 11.30 another large enema was given, and immediately returned with some fæcal matter. At 6 p.m. temperature was 103·2°, and at 10 p.m. 103·6°.

26th.—This morning the temperature was 102·2°. Bowels not opened, and no sickness during the night; tumour not altered in appearance, but not tender on pressure. Tongue drier, with a brownish band down the centre. At 10 p.m. temperature 104°; pulse 112; respirations 40. Bowels opened slightly about 6 p.m.

27th.—10 a.m.: Temperature 102·2°; pulse 96. The tumour is rather more prominent and tender, the skin over it slightly livid and tense. Temperature at 6 p.m. 103·2°, and at 10 p.m. 102·8°.

28th.—Temperature 101·4°. Tumour more prominent, and feels harder; the skin over it difficult to pinch up, and rather red; and there is an indistinct sense of fluctuation.

On the following day (the 29th) the tumour was still more prominent and distinctly fluctuating. In the afternoon it was opened, and discharged six or eight ounces of pus, which had a slightly offensive but not fæcal smell. The wound was dressed with antiseptic gauze, a drainage-tube having been introduced. The discharge was examined microscopically, but showed nothing but pus cells.

On May 1 the boy had a copious natural motion. The day after the abscess was opened his temperature had fallen to 98·4°.

On the 8th his temperature began again to rise, reaching on the evening of the 13th 102·2°, and two days later he complained of great pain and tenderness about two inches to right of the wound. On the following morning (16th) he was sick. The pain was relieved by poultices. The evening temperature was 101·8°. He had no sickness or pain on the following day. In the morning the temperature was 98·8°, and in the evening 102·2°.

On the 18th a good deal of discharge came from the wound, and he felt easier, but the evening temperature was 103·2°.

On the 22nd the wound was explored by a probe which passed directly inwards for nearly two inches, it being supposed that the rectus muscle was passed through. On the 24th, on account of the pain and tenderness complained of to the right of the wound, a second small incision was made about an inch to the right of the former, which gave exit to a small quantity of healthy pus. This gave immediate relief from pain, the amount of discharge rapidly diminished, and the temperature gradually fell to the normal. The bowels still remained confined, requiring aperient medicines every two or three days.

On June 16 he was discharged, with some slight induration about the wounds, but the abdomen resonant everywhere.

Remarks.—At first sight many of the appearances in this case seemed to point to intestinal obstruction from an organic cause. The attack was sudden, the bowels had been completely locked up for five days, and there had been a considerable amount of sickness. The position and appearance of the abdominal swelling also gave colour to the diagnosis of intussusception. On the other hand, the vomiting had not been constant or increasing, and there had been no straining or passage of blood. After the vomiting of the lumbrici it was thought that the tumour might be due to a colony of these worms in the large intestine, and it was with the view of dislodging them that santonin was added to the enemata. Probably, however, the lumbrici had no necessary connexion with the boy's attack, which, commencing as an abscess in the abdominal wall, set up some local peritonitis, and so produced paralysis of the muscular coat of the intestine and fæcal obstruction. It should also be noted that while the absence of all appearance of much distress or anxiety in the boy rather negatived the idea of such a grave lesion as organic intestinal obstruction, the fluctuations in the temperature were strongly suggestive of suppuration.

THE LATE MR. CALLENDER.—In an obituary notice of Mr. Callender inserted in the *New York Medical Record*, November 1, it is stated that after spending a considerable time in visiting friends in various localities, he was taken ill at the house of Mr. Henry C. Lea, of Philadelphia. He at once placed himself under the care of Drs. Da Costa and Levis, and was seen by other Philadelphia physicians. Previous to this sickness he regarded himself as a healthy man, and had not the least suspicion with reference to the disease from which he was suffering. Dr. Da Costa suggested that the urine should be examined, and Mr. Callender made the examination himself, finding it loaded with albumen. His feet were then œdematous and his pulse was feeble. His urine, on microscopical examination, was found to contain large and small hyaline and granular cysts and a large quantity of albumen, with a specific gravity of 1014. Having a desire to reach home, his physicians consented that he should attempt the journey, and accordingly he was brought to New York in a special train and carefully transferred to his state-cabin in the *Gallia*, which sailed on Wednesday, October 15. A cable dispatch announced that he died on the Monday following the day of his departure.

DEATH OF PROFESSOR JAMES AITKEN MEIGS.—The *Boston Medical Journal* of November 20 contains a biographical notice of Prof. J. A. Meigs, who died of pyæmia at his residence in Philadelphia, on the 9th of that month, in the fiftieth year of his age. His friends were taken by surprise, as he seemed possessed of an iron constitution, which gave promise of a green old age, and enabled him to meet the demands of a large practice and the lecture-room with ease. He was appointed to the Chair of Physiology at the Pennsylvania Medical College in 1859, and to that of the Institutes of Medicine in Jefferson Medical College in 1868, holding this last appointment to his death. It has been said that he has never been known to miss a lecture on account of ill-health until the last few days before his death. His last lecture, delivered November 1, was closed with these significant words: "Gentlemen, what I am seeking to impress upon your minds is that, physiologically speaking, a man's age is not to be measured by his years." Although so well known as a practitioner and professor of medicine, his widest reputation was as an ethnologist, his writings on craniology being both numerous and important.

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Medical Times and Gazette.

SATURDAY, JANUARY 10, 1880.

ANTISEPTIC SURGERY.

WHEN commenting, in August last, on Mr. Savory's Address in Surgery, delivered at Cork, we entered a protest against Mr. Lister's reticence in regard to statistical reports of the results of his practice, at the same time taking care to point out the very great difficulty of arriving at any trustworthy knowledge, by such means, of the value of his treatment as compared with that of others. In the course of the last few weeks the profession has had the opportunity of studying several tabular statements, which, we think, go far to prove the correctness of the position then assumed; while at the same time we cannot help feeling that their publication has been of the greatest possible advantage, and is likely to strengthen the faith of those who were disposed to doubt the efficacy of the antiseptic method. The tables to which we refer are to be found in the speeches of Mr. Mac Cormac and Mr. Lister and others at the meeting at St. Thomas's Hospital held on December 3, 1879, and in a paper by Mr. Watson Cheyne which appeared in a late number of a contemporary. Mr. Cheyne's paper illustrates well not only how complete a success is obtainable in a very dangerous branch of surgery by adopting systematic means for the prevention of the possibility of putrefaction, but also how elaborate and detailed statistics must be, in order to enable the reader to form an opinion of any value from their perusal. When we have a list of twenty consecutive cases in which the large articulations of the body have been intentionally opened by the surgeon's knife, without anything approaching to a mishap, and twelve more of accidental wounds of joints, in all but one of which untoward results were completely avoided, it may almost be said that the element of danger has been removed from this department of our art. And, on the other hand, if we carefully study the tables, it is impossible to hide from ourselves the fact that many of these cases would simply appear, in ordinary hospital statistics, as recoveries after operation, alongside of recoveries after amputations, removal

of tumours, and what not, and in the eye of the casual reader they would seem to be of no greater value; whereas, in reality, most, if not all, of those who do not practise antiseptic surgery would consider that they involved so much risk that they would not hesitate to let their patients go away unrelieved.

Space does not allow the full discussion of these tables, but as illustrations of what we have said above we may draw attention to two cases, one of ununited fracture of the neck of the femur in a woman aged fifty-four, in which Mr. Lister cut down upon the fracture and freshened the extremities of the fragments; and one of rupture of the rectus femoris, in which, in order to approximate the separated ends, it was necessary to open the knee-joint.

Mr. Spencer Wells's observations will carry great weight to all members of the profession. It is well known that his percentage of success after ovariotomy has been steadily on the increase, each successive batch of a hundred cases showing a smaller mortality than its predecessor, but he himself points out that since he has strictly carried out antiseptic principles the advance has been, out of all proportion, greater than it had been before. When a man occupies the position of a pioneer in a particular branch of surgery, it is not to be expected that the increased success which depends upon greater skill and wider experience should follow a constantly increasing ratio; it is therefore quite fair for Mr. Wells to conclude that the great diminution of mortality in his last eighty-four cases is due to the only new element he has introduced into the operation.

Mr. Lister points out with justice that he cannot be accused of silence on the question of his own results. The statistics of his Glasgow practice, in the comparative infancy of his discoveries, were no doubt very remarkable, as were also the facts which he gave to the British Medical Association in 1875. He is now very much to be congratulated on the striking statement he has been able to make. The part of his speech which dealt with this subject is well worthy of careful consideration, and is too full of matter for reflection to allow of much comment in the limits of a leading article. The following facts, however, strike the reader at first sight. First, under certainly less favourable hygienic conditions, and whilst dealing with presumably much more serious cases than the surgeons at St. Bartholomew's Hospital—who, be it observed, follow out in considerable measure the principles of the practice that he has taught,—Mr. Lister is able to boast of a distinctly smaller percentage of mortality from all causes in his major operations, and notably from those diseases which are included under the term blood-poisoning. Secondly, out of such a large number of cases as 553 in which it was possible to operate strictly antiseptically, the deaths from blood-poisoning were only two, and one of them was explainable as the result of a misadventure. And thirdly, he indicates pretty clearly how easy it would have been by a very slight, and some may think quite justifiable, manipulation of his figures, to make his statistics appear in a still more favourable light.

We repeat, then, that the profession have reason to be well satisfied with the materials that have been laid before them; and we hold that Mr. Lister is to be congratulated upon the effect which their publication is likely to produce.

THE RELATIONSHIP OF BRIGHT'S DISEASE TO OTHER DISEASES.

PART II.—THE PRIMARY FORMS.

In a previous article we gave at some length the results of Professor Bamberger's researches into the connexion between the secondary forms of Bright's disease and the diseases in which they originate.(a) We now propose to follow him in his investigation of the primary forms, and especially of their sequelæ. It will be remembered that the total number of primary and secondary cases of nephritis examined by Professor Bamberger was 2430, and of these 807 were primary—that is, cases either of parenchymatous (tubular) or of interstitial nephritis occurring in previously healthy subjects. Professor Bamberger remarks at the outset that the origin of the disease can only be referred in a minority of the cases to catching cold or getting wet; in the majority it cannot be explained even after the most careful clinical inquiry. The 807 primary cases included 67 acute, 357 chronic tubular, and 383 interstitial nephritis.

The sexes were represented by 445 males, or 55 per cent. of the whole number, and 362 females, but Professor Bamberger shows that the proportion of female to male cases is not accurately brought out by these figures. According to the ten years' mean the proportion of male to female patients of all kinds in the Allgemeines Krankenhaus at Vienna is as 63 to 37. Hence, if primary Bright's disease were equally common in both sexes, the numbers should be 508 males and 299 females, whereas, in fact, the preponderance is on the side of the females in the cases before us; and if the secondary forms associated with pregnancy and parturition were included, it would be still greater.

The ages of the primary cases for each decennial period are given in the following table. Professor Bamberger states that the majority of cases of acute nephritis (54 out of 67) occurred between ten and forty years, of chronic parenchymatous nephritis (214 out of 357) between thirty and sixty, and of granular contracted kidney (238 out of 383) between forty and seventy years.

Decennial period.	Number of cases.	Males.	Females.
1 . . .	1	—	1
2 . . .	50	33	17
3 . . .	121	64	57
4 . . .	149	93	56
5 . . .	156	94	62
6 . . .	152	78	74
7 . . .	115	57	58
8 . . .	55	22	33
9 . . .	8	4	4

The sequelæ, or the diseased conditions which complicate the later stages of the chronic forms of primary Bright's disease, offer more interest than the (at present) barren subject of the etiology of the latter. Beginning with affections of the brain, we find that cerebral hæmorrhage occurred in 82 of the 807 cases, 52 of these being associated with granular kidneys. Two points are worth notice here: first, the great size of the extravasations in the apoplexy of Bright's disease; and, secondly, the frequency with which the renal mischief escapes detection *intra vitam*, so that apparently healthy individuals are suddenly and unexpectedly struck down by fatal hæmorrhage. Encephalitis, with localised *foci* of inflammatory softening and meningitis, are both of rather rare occurrence. The latter, especially the tubercular form, is a much commoner feature in secondary than in primary Bright's disease. Pneumonia, on the other hand—to turn to diseases of the lungs—is very common, and 163 cases, or 22 per cent., were complicated with it. It generally is of the croupous lobar kind, and here again the elderly people whom it kills are often only found to be the subjects of granular kidney (interstitial nephritis) in the post-mortem theatre. Recent pleurisy, generally of a fibro-serous character, and uncomplicated with pneumonia or any other lung affection, occurred fifty-seven times, or in 7 per cent. of the cases. The other chief sequelæ of Bright's disease observed by Bamberger—excluding heart diseases, which will be presently considered by themselves—were

(a) *Volkmann's Sammlung Klinischer Vorträge*, No. 173.

peritonitis (twenty-two cases, or 2·7 per cent.), dysentery, and extensive intestinal catarrh, particularly the former (109 cases, or 13·5 per cent.), and general dropsy (215 cases or 26·6 per cent.). Bamberger considers the dysentery as very probably due to the transudation of urea into the bowel, and its conversion there into caustic ammonium carbonate, according to the theory of Treitz,(b) to which he refers.

Of all the pathological changes secondary to Bright's disease which the heart undergoes, none is of course so important as hypertrophy; fatty degeneration and pericarditis, generally serous, are, however, not so very rare, and the former was found in 97 cases, the latter in 99, 64 times as recent inflammation. Endocarditis and myocarditis are both so seldom met with as to need no further mention here. On the other hand, the frequency of cardiac hypertrophy and dilatation is most remarkable. Of Bamberger's 807 cases of primary Bright's disease they occurred in 344, or 42·6 per cent. of the whole number. For the sake of brevity, we append a table of the different combinations of hypertrophy and dilatation which were associated with the three forms of nephritis adopted by Bamberger in his classification. It shows that the right side of the heart is *never*, the left side often, alone hypertrophied. That excentric hypertrophy of the whole heart is the most frequent condition (in 41 per cent.), and excentric hypertrophy of the left side (31 per cent.) the next in frequency, while simple hypertrophy of the whole heart and simple dilatation are rare.

	Form of Bright's Disease.			
	Acute.	Chronic tubular.	Atrophic (granular).	Totals.
Excentric hypertrophy of whole heart	3	51	88	142
Excentric hypertrophy of left ventricle	4	38	65	107
Simple hypertrophy of whole heart	2	3	6	11
Simple hypertrophy of left ventricle	2	24	39	65
Simple dilatation of whole heart	4	5	7	16
Simple dilatation of left ventricle	0	1	2	3
Totals	15	122	207	344

But what a careful reader will at once notice in this table is that, as Bamberger says, "Hypertrophy of the heart occurs in every period of the disease, but with greater absolute as well as relative frequency the longer the disease lasts." Thus, 122, or more than a third of the 344 cases, were associated with parenchymatous, or tubular, nephritis; whereas it is generally taught and believed, especially in England, that cardiac hypertrophy is the appanage of interstitial nephritis. Bamberger's position on this question is as follows:—After studying it carefully for years, he finds that cardiac hypertrophy is met with in both forms of primary chronic Bright's disease, but decidedly more often in the interstitial form. Its relative frequency in the latter is, however, not sufficient for it to be made a point of distinction between tubular and interstitial nephritis; and he regards the difference between the two forms in this respect, not as the result of different pathological processes, but *of the longer or shorter duration of the renal affection.*

Before entering into a short discussion of Bamberger's theory of the actual cause of the hypertrophy, it may be interesting for a moment to illustrate by his figures the remarkable way in which certain of the complications of primary Bright's disease increase in frequency directly as the duration of the malady, while others, on the contrary, diminish in the later and reach their maximum in the middle period. The latter statement is true of pneumonia, pleurisy, dysentery, and general dropsy.

Complication.	Percentages.		
	Acute.	Chronic tubular.	Atrophic interstitial.
Fatty degeneration of the heart	6·0	12·0	13·0
Cerebral apoplexy	1·5	8·0	13·6
Encephalitis	1·5	3·0	4·4
Pericarditis	3·0	8·4	14·4
Cardiac hypertrophy	22·4	34·2	54·0
Pneumonia	2·0	22·0	19·0
Pleurisy	7·5	9·0	5·0
Dysentery	12·0	16·0	12·0
Dropsy	33·0	33·0	19·0

Without discussing this table in detail, we cannot help noticing the large percentage of cases of cardiac hypertrophy (nearly half) associated with the acute and chronic tubular forms of Bright's disease. It will be seen that Bamberger's statement that cardiac hypertrophy occurs in all stages of primary Bright's disease, but with greater relative frequency the more chronic the latter, is fully borne out.

And now we come to the question of the actual connexion existing between the renal and cardiac affections, as to which Bamberger admits two possibilities: either the hypertrophy depends on the renal disease, or both are dependent on a third common factor. The possibility of the renal disease being secondary to the hypertrophy is of course excluded in dealing with "primary" Bright's disease. After discussing the various theories which, from Bright onwards, have been offered in explanation of the hypertrophy, Professor Bamberger comes to the conclusion that there is nothing else for it but to accept the first possibility just mentioned, and then to explain the changes in the heart on mechanical principles by the accommodation of the organ to increased demands on its propelling powers. At first sight this looks only like Traube's theory over again (increased work from destruction of renal structure, and impediment to excretion of water from the system); and in reality the two theories are not dissimilar. Bamberger, however, considers the renal process *per se* as only effective in so far as it interferes with the urinary function. He believes that the cardiac hypertrophy is the result of "the absolute increase in the general mass of the blood owing to the diminished excretion of water by the kidneys." The course of affairs, according to him, runs thus:—Excess of water in the system raises the arterial blood pressure, the left ventricle dilates and hypertrophies, and throws more blood into the veins; hence venous plethora, more work thrown on the right side of the heart, and dilatation and hypertrophy of the right ventricle. This theory, as Bamberger himself admits, is open, among others, to one principal objection—that while retention of water in the system is certainly of common occurrence in the more acute forms of primary Bright's disease, in many chronic cases, and especially in those of so-called contracted kidney (where cardiac hypertrophy is most pronounced), there is an apparent polyuria. To this, however, he replies, that we know scarcely anything clinically of the early stages of contracted kidney; but we are almost certain, from the anatomical researches of Klebs, Buhl, and Thoma, that the progressive changes by which the urinary tubules are gradually surrounded by connective tissue, and their epithelial structures destroyed, must for a time at least diminish the excretion of water through the kidneys. It is during this period that Bamberger assumes the development of the cardiac hypertrophy. The polyuria, as we understand him, occurs later, when the collateral circulation in the kidney, which Thoma has especially described (*Virchow's Archiv*, Band 71), has established itself. A second and somewhat trifling objection

(b) "Ueber urämische Darmaffectionen" (*Prager Vierteljahrschrift*, 1859, Band IV.).

to the theory is, that cases of anuria prolonged for one or two weeks have been recorded without the development of cardiac hypertrophy. Bamberger points out that not only must we know whether water was drunk, and in what quantity, during the anuric period, to form a judgment on these cases, but that the impaired state of the patient's nutrition must be remembered too. He regards them as difficultly explicable exceptions to the general rule. A third more important objection is, that retention of water ought to cause dilatation either of the whole vascular system, or at least of the arterial portion, which it has not been proved to do. The answer here is, first, that the subject has as yet been but little investigated; and secondly, that it is very difficult to assign a mean circumference to the various portions of the aortic system, but that measurements which have been made (by Ewald) do show some increase in the circumference of the aorta under these circumstances. A final objection, that other diseases of the kidney which limit its secretion do not cause hypertrophy of the heart, is met by the answer that such diseases (cystic degeneration, multiple abscess, cancer, echinococcus, etc.) are not only very rare, but that they seldom fulfil the conditions necessary to the development of hypertrophy—sufficient duration of the disease, which must be bilateral, and which must not materially affect the volume of the blood, or greatly impair the general health. As a fact, cases in point have been reported by Cohnheim, Galabin, Stiller, and Bamberger himself. And what becomes, it may be asked, in Bamberger's hands, of the other theories of the origin of cardiac hypertrophy in renal disease? Traube's theory, as we have seen, he partly accepts and partly rejects.

Bright's original theory, that the heart enlarges owing to some change in the quality of the blood, as well as Senator's, in which urea is the substance that raises the arterial pressure in parenchymatous nephritis, and Ewald's,(c) in which a change in the blood, due to the renal disease, increases the resistance in the systemic capillaries, he rejects. He admits the possibility, but not the probability, of such a mode of origin of the cardiac hypertrophy. In the same way he refuses to admit Buhl's idea,(d) that the heart changes are due to previous inflammation, which occurs at the same time as, but independently of, the renal disease. Two facts he specially points out are fatal to Buhl's theory—first, that inflammatory affections of the heart are of late occurrence in Bright's disease; and secondly, that Buhl himself found all traces of inflammation absent in 21 per cent. of his cases of cardiac hypertrophy and renal disease.

Lastly, Bamberger rejects the essentially identical theories of Dr. G. Johnson and of Sir William Gull and Dr. Sutton, which refer the cardiac hypertrophy to a general affection of the small arteries and capillaries either in the form of muscular hypertrophy or of "hyaline-fibroid" degeneration. He admits that Dr. Johnson is right in describing muscular hypertrophy of the systemic arterioles with diminution of their calibre, but he denies that it precedes the cardiac hypertrophy, or that there is any proof that it does so, and he ascribes it to the increased arterial pressure which is the result of the heart-change. He also points out that these theories fail to explain the hypertrophy of the *right* side of the heart. It should be added that Bamberger is of Dr. Johnson's opinion, that arterio-capillary fibrosis, or "hyaline-fibroid" degeneration, is a product of microscopical preparation. In conclusion, if we may be allowed to express an opinion on the work of so eminent a man as Bamberger, we should be inclined to say that even *his* theory scarcely answers to the requirements of a good theory—namely, that it shall explain all the facts naturally and without being strained. It is, however, a good theory in this respect: that it suggests several points for future inquiry, which may be very fruitful in directing us to the true *rationale* of the connexion between cardiac hypertrophy and renal disease. Might we suggest that we know too little about the reason for the altered function of the skin in chronic Bright's disease? Why do patients thus affected cease to perspire, and why does their skin become so dry and unaffected by the ordinary stimulants of the sweat-glands? In diabetes we can understand that the dryness is caused by the drain of water from the body; but in Bright's disease, where more or less retention of water is the rule, the explanation is difficult. Possibly, whatever the cause, one of the factors in the production of cardiac hypertrophy is this impaired function of the skin; in any case the phenomenon is of great interest, and deserves more attention than it has yet received.

(c) *Medical Times and Gazette*, vol. ii. 1878, page 105.
(d) *Ibid.*, vol. i. 1879, page 648.

THE WEEK.

TOPICS OF THE DAY.

At the last week's meeting of the Metropolitan Board of Works a very important communication from the Home Secretary was read, in reply to the representations made to him by a deputation from the Board on the subject of the appropriation of sites for dwellings for the labouring classes and the provision of accommodation for the number of persons of the same classes who would have been displaced under the Metropolis Street Improvements Act of 1877. The letter is too long for insertion, but it contains a refusal from Mr. Cross to sanction the scheme put forward by the Board for his approval. The Act clearly contemplated an early provision of improved habitations for the class of the population displaced by the pulling down of their houses; but, although large numbers have been evicted, no provision has, up to the present time, been made for their accommodation. To sanction the application now put forward by the Board would, Mr. Cross points out, still leave the dispossessed population without accommodation during an intermediate period, which might extend to years, while the new houses were being got ready. The deficiency of house-room under the proposed scheme would be a total of 1601 out of 7224; and while expressing his sense of the great difficulties which the Board must experience in carrying out the Act thoroughly, the Home Secretary records his conviction that the practical solution of the problem lies in the pressing on, with all energy, the erection of houses for the working-classes, so many of whom will suffer by displacement, and the purchasing by agreement, if necessary, additional sites, in order to make up the deficiency of those lands already at the disposal of the Board. The consideration of this communication was referred to the Works Committee without any discussion.

The *Broad Arrow* states that the practical abolition of the dual administrative system of the Army Medical Staff in India will date from the 1st instant. Orders have been issued for some of the executive officers of the "Imperial" Department to place themselves under the orders of the Surgeons-General of the Indian Medical Service, and in the same way Surgeons-Major and Surgeons of the latter will, in some of the circles, be at the disposal of administrative officers, who report direct to Sir William Muir. The dual set of principal medical officers will thus be gradually abolished, and the two Services amalgamated, to the great advantage, not only of the Indian Treasury, but of the Public Services.

The Registrar-General's report on the public health for the closing week of the past year shows that the mortality from all causes was at the average rate of 28 deaths annually in every 1000 persons living. In the twenty

large English towns the rate of mortality per 1000 ranged from 17 in Brighton and Sunderland, to 36 in Liverpool, and 46 in Plymouth; whilst in Edinburgh it was 21, in London 27, and in Dublin 45. Scarlet fever showed the largest proportional fatality in Newcastle-upon-Tyne, Nottingham, and Bristol; and measles in Plymouth, Hull, Liverpool, Nottingham, and Leeds. Diphtheria caused 11 deaths in London, and 4 in Birmingham. Two more fatal cases of small-pox were recorded in London, but not one in any of the nineteen large provincial towns, though 5 deaths were attributed to it in Dublin. Whooping-cough was again the most fatal zymotic disease in London, and the deaths referred to diseases of the respiratory organs, which in the eleven preceding weeks had increased from 190 to 799, declined last week to 652, but exceeded the corrected weekly average by 128. The Metropolitan Asylum Hospitals contained 350 scarlet fever cases, against 340 and 346 at the end of the two previous weeks, and 38 new cases were admitted during the week under notice. The small-pox hospitals at Fulham and Deptford contained 48 patients, against 38 and 48 at the end of the two preceding weeks, and 5 new cases were admitted to these hospitals during the week. The Highgate Small-pox Hospital at the end of last year contained only 3 patients. At the Royal Observatory, Greenwich, the duration of registered bright sunshine during the week was 2·6 hours, or 4·8 per cent. of its possible duration, the sun being above the horizon during 54·1 hours.

Last week the new Lord Mayor of Dublin, Mr. Gray, M.P., was installed with the usual ceremonies. When the investiture was completed at the City Hall, and the Lord Mayor had taken the chair, he returned thanks for the honour paid to him, and referred at some length to local affairs; amongst other things he announced that the Council had taken considerable trouble for the purpose of carrying out great public improvements in Dublin. They contemplated expending during this year a sum of no less than £200,000 in public works; about £100,000 would be spent in re-paving the city, £35,000 in the carrying out of the provisions of the Artisans' Dwellings Act, £30,000 in improving the sewers, and other sums in the erection of abattoirs and similar necessary works. He further alluded to the large powers conferred upon the local bodies by the Public Health Act and the Municipal Privileges Act, which he thought would greatly tend to the ultimate improvement of the city.

There would now appear to be no doubt as to the action to be taken in respect to the metropolitan water-supply. The *Land Agents' Record* states that Messrs. Smiths and Gore, land agents, of Whitehall-place, have been instructed by the Home Secretary to make the necessary negotiations for the purchase by the Government of the rights and interests of the various London water companies, and that such negotiations are now proceeding. It will be remembered that it was suggested by Mr. Cross, in the House of Commons last session, that these interests should be taken over either by the Government and the Metropolitan Board of Works as jointly interested, or that the operation should be undertaken solely by the Government through the Home Department, by means of a private Bill. The latter would seem to be the course decided on, and in regard to this important Government undertaking it may be mentioned that, in accordance with the statement of Mr. Cross in Parliament, the basis of the terms of purchase will be the market price of the several companies' stocks on July 29, 1879.

As previously mentioned, the recent outbreak of typhoid ever in the Cheshire County Lunatic Asylum at Upton, near Chester, has been traced to an improper system of drainage, and on Monday last the matter came before the Court of Quarter Sessions, on the report of Mr. Griffiths, civil engineer of London, who condemned the present sewage farm belonging to the institution, as being imperfect, and situate too close to the Asylum. He suggested that the Asylum drainage should be diverted into the Chester city sewers, to which there is sufficient outfall. The estimated expenditure for this improvement (£6000) was, however, considered excessive, and eventually an amendment was proposed and carried, that the matter be referred back to the Visiting Justices, with instructions to consider some more inexpensive scheme, which would involve a cost not exceeding the sum of £1000.

THE RESURRECTION OF CHOLERA.

According to a report communicated by the Belgian Government to the Royal Academy of Medicine at Brussels (*Bulletin de l'Académie Royal de Méd.*, tome xiii., No. 9), on October 23, 1879, the cholera epidemic, which had been ravaging Japan during the summer of 1879, broke out after the graves of soldiers who died of cholera in 1877 had been opened with a view to reburying their remains more carefully than could be done when they were first interred. The neighbourhood of the burial-ground was first attacked, and then the disease gradually spread to other localities. Up to August 4, 1879, 41,647 persons had had cholera, 23,350 had died, 5054 recovered, and 13,243 were still under treatment.

PATHOLOGICAL SOCIETY OF LONDON.

The annual meeting of this Society for the election of office-bearers, and for hearing the annual report, took place on the evening of Tuesday last, the 6th inst. The following are the names of the gentlemen elected for the ensuing year:—*President:* Jonathan Hutchinson. *Vice-Presidents:* *George Buchanan, M.D., George Harley, M.D., F.R.S., James Edward Pollock, M.D., Hermann Weber, M.D., Christopher Heath, Thomas William Nunn, *James A. Salter, Septimus Wm. Sibley. *Treasurer:* John Whitaker Hulke, F.R.S. *Honorary Secretaries:* *Joseph Frank Payne, M.B., W. Morrant Baker. *Council:* Thomas Barlow, M.D., *Evan Buchanan Baxter, M.D., Sidney Coupland, M.D., *Sir Joseph Fayrer, K.C.S.I., M.D., William Smith Greenfield, M.D., James Pearson Irvine, M.D., *William Miller Ord, M.D., Frederick Taylor, M.D., *Thomas Tillyer Whipham, M.B., John Williams, M.D., *J. N. Davies-Colley, Rickman John Godlee, John Warrington Haward, Henry Greenway Howse, *Joseph Lister, F.R.S., Jeremiah McCarthy, William Mac Cormac, William Bedford Kesteven, M.D., William Johnson Smith, William Warwick Wagstaffe. The gentlemen whose names are marked with an asterisk were either not on the Council or did not hold the same office during the preceding year. The Surgical Secretary read the annual report, which gave evidence of the continued popularity and energy of the Society. The report paid a well-merited tribute to the memory of the late President, Dr. Murchison, who, as Honorary Secretary, Treasurer, and President, and the exhibitor of upwards of 150 specimens, had done so much for the success of the Society. We noted that the report, unlike its predecessors, contained no intimation of the proposal of any special subject for discussion during a portion of the remainder of the present session. The cordial thanks of the Society were awarded, by acclamation, to the retiring Medical Secretary, Dr. Douglas Powell. Votes of thanks were also unanimously accorded to the retiring members of Council.

VIENNA PROFESSORS.

On December 7, 1879, Professor Skoda, of Vienna, attained his seventy-fourth year. His general health appears to be good for his age, but on his birthday he was confined to his bed by some ailment affecting his feet. On December 29

Professor Arlt, the well-known oculist, reached the fortieth year of his medical career, and received the congratulations of his numerous friends. There must be many of Arlt's pupils in England and America who would heartily join in these "jubilee" greetings.

RESIGNATION OF DR. SEATON.

The resignation of the Medical Officer of the Local Government Board, Dr. E. C. Seaton, which we noticed some time ago, has now been officially announced. His health and strength have for some time been giving way; and it is now thought desirable by his medical advisers that he should withdraw from the arduous and responsible duties of his post. Dr. Seaton succeeded Mr. John Simon, on that gentleman's retirement in 1876. Previous to that time he had acted as Assistant Medical Officer to the Board, in which capacity he particularly devoted himself to the work of public vaccination, and succeeded in bringing the administrative arrangements of this important branch of the public service to a very high state of efficiency. His state of health when he succeeded Mr. Simon was not satisfactory, and the additional work that then devolved upon him quickly told, so that last year he was obliged to take a long sick-leave. He returned to work in apparently good health, but soon broke down again, and has been now compelled to retire. Dr. Seaton is succeeded in his office by the Assistant Medical Officer of the Local Government Board, Dr. George Buchanan, who became attached to the Privy Council Office in 1869 as an Inspector of Public Health, but who, prior to his appointment, had already been largely engaged in conducting health-inquiries for the Government. Dr. Buchanan's published official reports are numerous and important, particularly those which relate to the influence of sanitary works in promoting the health of towns, and to the relation between phthisis and subsoil moisture. Previous to his entering permanently into the service of the Government, Dr. Buchanan was one of the Physicians to the London Fever Hospital, and to the Hospital for Sick Children in Great Ormond-street, and was also Medical Officer of Health for the St. Giles's District. These offices it was necessary he should relinquish; but he has subsequently held the honorary appointments of President of the Society of Medical Officers of Health and of the Medical Society of London. Dr. Buchanan's appointment to the post of Medical Officer will be hailed with great satisfaction by the profession at large.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.

The second meeting of the session 1879-80 of the West Kent Medico-Chirurgical Society was held at the Royal Kent Dispensary, Greenwich, on November 7, 1879 (Mr. J. P. Purvis, President, in the chair), when Dr. Curnow read a paper on "Rest in the Treatment of Medical Cases," in which he said that rest in the treatment of surgical cases had been fully treated of by Mr. J. Hilton, but that rest in the treatment of medical cases had not received the attention it deserved. Dr. Curnow then said that if we turned to our text-books we should find that specific diseases, parasites, and gout, are almost the only diseases treated by specific remedies, and that the treatment of all other diseases depends upon two principles, viz., (*a*) support to the patient; (*b*) giving physiological rest to the organ or organs involved. The first point to be attended to is to remove the cause of the disease, as no treatment will be of any avail until this is attended to. Dr. Curnow then cited several typical examples of diseases of the brain, lungs, liver, stomach, kidneys, etc., in proof of the benefit of this mode of treatment.

SIR DOMINIC J. CORRIGAN, BART., M.D.

We regret to announce the very serious illness of this most distinguished member of the profession. Sir Dominic is suffering from an attack of gout in the head. He is assiduously attended by his friends, Drs. Banks and Cruise, but his condition is such as to excite the gravest fears, especially at his time of life.

DR. NITZE'S CYSTOSCOPE.

An ingenious but rather complicated means of illuminating the bladder, as well as of making an optical examination of it and of the urethra, has lately been introduced by Dr. Nitze, of Vienna, who has described it in detail in the *Wiener Med. Wochenschrift*, Nos. 24, 25, 26, 29, and 30, 1879. More recently still it has been made the subject of an article by Dr. Oberlaender, of Berlin, in the *Berliner Klin. Wochenschrift*, No. 48, 1879, and it has been criticised in the *Vierteljahrschrift für Dermatologie*, 1879, and in the *Wiener Med. Wochenschrift*, No. 47, 1879, by Professor Auspitz of Vienna. As we intend here merely to sketch the principle of the cystoscope, we give these references in order that any of our readers desiring detailed information on the subject may consult the original papers, which have also the advantage of good illustrations. The cystoscope differs from the old endoscope in the method of illumination. The light is not reflected from without, but is generated in the interior of the organ itself. Its source is a loop of platinum wire heated by a galvanic current. To avoid the injury to the parts which the heat of this loop would otherwise cause, it is kept continually cool by a stream of water running through a double system of tubes. The light emanating from the wire diffuses itself in the cystoscope through a small window of rock-crystal in the side of the lantern enclosing it, and which forms the terminal bend of the endoscopic tube—the short, curved portion of the catheter. In the *urethroscope* the loop of wire, with its cooling apparatus, lies close to the external wall of the catheter, very near its internal orifice (which is cut off obliquely), and out of the axis of the tube. In the cystoscope the interior of the bladder, illuminated by the lantern, is observed through a second window anterior to the latter in the straight portion of the catheter by means of a prism, which acts by total internal reflection, and transmits the image to the "optical apparatus," which occupies the rest of the anterior part of the catheter. This consists of an objective of small focal length, which forms in front of it a small real inverted image of the mucous membrane, of a lens in the middle of the tube which converts the inverted into an upright image, and of an external eyepiece, which transmits to the observer's eye a magnified upright representation of the object. The lenses are so arranged as to be capable of accurate focussing. This optical apparatus is adapted equally to cystoscope and urethroscope. With the urethroscope, instead of the straight catheter with obliquely truncated end, catheters may be used with a short bent portion, with a window either in front of or behind the angle, as the case may be, through which the mucous membrane is at the same time illuminated and observed. The source of electricity is a two-celled Bunsen's battery, and the light of the incandescent platinum is kept uniform with varying lengths of tube and varying resistances of conducting wire by means of a rheostat of special construction. The latter, as well as the tubes and the lighting and water-carrying apparatus, is the work of the eminent instrument-maker, Leiter of Vienna; the optical arrangements are made by Herr Benèche of Berlin. The principle of the instruments can be applied to the examination of the rectum, mouth, and vagina. There appears to be no dispute as to the excellent

results obtained by the cystoscope. Professor Auspitz considers Nitze's urethroscope more difficult to manage than the old-fashioned endoscope, and raises various objections to it, but there seems no reason to doubt that in careful hands it works well. Perhaps the future will suggest improvements in detail, but the general principle of the instrument seems unlikely to undergo much modification.

THE METROPOLITAN WATER-SUPPLY FOR NOVEMBER LAST.

The report of the Water] Examiners on the supply to the metropolis during the month of November last shows a rather more satisfactory state of affairs. The water in the Thames at the different places whence several of the London companies derive their supplies was good throughout the month, and was generally in a much better condition throughout the whole of November than it was during the previous month. The water in the river Lea was also generally good during the period. The water supplied by the whole of the metropolitan water companies was clear, bright, and properly filtered. Most of the London companies are now prepared to give a constant supply on application, and some of them are compelling a constant supply to be received by all new estates and buildings in their area, under the Metropolis Water Acts and Regulations. The Grand Junction Company have laid duplicate pipes throughout the greater part of the neighbourhood of Grosvenor-square for the better supply of the high services in this important part of their district. Dr. Frankland's report on the water supplied by the different companies after filtration is as follows:—The Thames water supplied by the Chelsea, West Middlesex, Southwark, Grand Junction, and Lambeth Companies was of much better quality than is usual at this time of the year, the West Middlesex Company's water being especially remarkable for the small amount of organic elements contained in it. The Lea water distributed by the New River Company was of about the same quality as Thames water, but that supplied by the East London Company was considerably inferior to any water taken from the Thames. The deep-well water supplied by the Kent and Colne Valley Companies, and by the Tottenham Local Board of Health, was of its usual excellent quality for dietetic purposes.

THE HEALTH OF BIRMINGHAM.

Dr. Alfred Hill, the Medical Officer of Health for the borough of Birmingham, in his report for the quarter ending 30th June last, records the birth-rate of the district as having been 40·2 during the period, against rates of 42·58 and 42·8 in the second quarters of 1877 and 1878 respectively. The death-rate for this quarter was equivalent to an annual death-rate of 22·04 per 1000 of the population, whilst in the second quarters of 1877 and 1878 the rates were 25·06 and 21·35 respectively. The slight increase in the death-rate, as compared with the second quarter of last year, is entirely due to a larger mortality from local diseases generally, more particularly bronchitis—induced, no doubt, by the unusually cold weather which prevailed throughout the period—and to atrophy and debility. The deaths from the seven principal zymotic diseases were markedly less, numbering 265 against 384 in the corresponding quarter of last year, and it is certainly noteworthy that not only was there no death recorded from small-pox, but no case of sickness even from the disease was reported throughout the district. Whooping-cough, which has been singularly prevalent all over the kingdom, was the most fatal of the zymotic diseases in Birmingham, and occasioned 122 deaths, against 113 in the spring quarter of 1878. Scarlet fever, the recent epidemic of which in Birmingham attained its height in the fourth week of October, 1878, has gradually declined, and was responsible for only 51 deaths, against 156 in the same period of last year. After careful analysis Dr. Hill reports that the quality of the Corporation water-supply shows considerable improvement over that furnished to the town in the corresponding quarter of last year; but the well-waters examined were, as is generally the case, nearly all much contaminated with sewage and other impurities, and consequently were totally unfit for human consumption.

COLLEGIATE EXAMINATIONS.

The new mode of conducting the primary, or Anatomical and Physiological, examination for the diploma of membership of the Royal College of Surgeons was commenced on the 5th inst., when 140 candidates presented themselves at the written portion of the examination. The following questions were submitted in Anatomy; of the six questions so given, candidates were required to answer four, and only four, from one to three o'clock, viz.:—1. Describe the clavicle, and mention the various structures attached to, and in relation with it. 2. Describe the ligaments of the elbow and superior radio-ulnar articulation; and mention the structures in immediate relation with them. 3. Describe the boundaries and contents of the posterior triangle of the neck. 4. Describe the arrangement of the peritoneum in the female pelvis, giving its relations to the several organs. 5. Describe the posterior mediastinum and its contents. 6. The orbit having been unroofed, describe all the parts met with successively down to the level of the optic nerve. The following were the questions on Physiology, to which the same regulation applied, and the time given was from 4 to 6 p.m. the same day, viz.:—1. What do you understand by the term protoplasm? Describe the different forms of epithelial cells, stating where they are found. 2. Give the structure of a capillary bloodvessel, and state the conditions which modify the capillary circulation in any part or organ. 3. What is the average temperature of the body? How is this maintained and regulated? 4. What are the functions of the third division of the fifth pair of cerebral nerves, and of the portio dura of the seventh? Give the evidence on which your statements are founded. 5. Describe the structure of a lobule of the liver. What are the functions of the liver? 6. Give the changes which take place in the circulation of the blood at birth, and state the cause or purpose of each. At the oral examination, which was commenced on Wednesday, the 7th inst., the candidates, instead of having, as heretofore, ten minutes at three tables, were examined for fifteen minutes on Anatomy and for the same time on Physiology, the examiners in each division being—at tables A and B, representing Anatomy, Messrs. Christopher Heath, of University College Hospital, and P. P. Pick, of St. George's Hospital; and Arthur E. Durham, of Guy's Hospital, and Walter Rivington, of the London Hospital. At C and D, representing Physiology, were Messrs. H. Power, of St. Bartholomew's Hospital, and B. T. Lowne, of the Middlesex Hospital; and J. W. Hulke, of the Middlesex Hospital, and W. M. Baker, of St. Bartholomew's Hospital. Mr. John Wood, F.R.S., of King's College Hospital, is the chairman. Rejection in either one or other of the subjects involved a "pluck" in both. With regard to the marking, we believe that at present the total maximum in both Anatomy and Physiology will be represented by 20, and the total minimum by 6. The list of successful candidates is published on another page.

THE SANITARY CONDITION OF BIRKENHEAD, 1878.

Properly to estimate the amount of labour which devolves upon one who is a medical officer of health to a large district, it is only necessary to examine carefully the annual report

of such a borough as that of Birkenhead. Mr. Francis Vacher, the Medical Officer of that district, has prepared an exhaustive report for the year 1878 on the sanitary condition of the neighbourhood committed to his charge, and we regret that want of space compels us to accord it only a brief notice. As the period for the official numbering of the people approaches, the difficulties of the medical officer to obtain a fair calculation of the steady increase of population become greater: yet upon the correctness of his calculations the exactness of his statistics entirely depends. With this important point in view, Mr. Vacher commences by explaining the method which he adopts for fixing the present number of dwellers in his district. During the year 1878 the returns of the local registrars record 2932 births and 1656 deaths. The zymotic diseases somewhat exceptionally fatal in certain localities during the past year were measles and whooping-cough, but the zymotic death-rate was only 3·9 per 1000 living. No death is reported as occurring from small-pox, and Mr. Vacher observes that this is no mere fortuitous escape, but is mainly due to the protected state of the population, consequent upon the vigorous action taken in 1877 to procure the vaccination and revaccination of the whole of the community. Thus, although upon two occasions during the past year small-pox was imported into the borough, prompt action and isolation sufficed to prevent its spread. In concluding his report, Mr. Vacher expresses his satisfaction that during the past session the Legislature has strengthened the hands of medical officers of health by passing three such measures as the Factories and Workshops Act, the Public Health (Water) Act, and the Contagious Diseases (Animals) Act, all of which will, he thinks, tend to check the spread of disease, or of practices predisposing to disease.

TWO CASES OF NERVE-STRETCHING.

In the *Berliner Klin. Wochenschrift*, No. 46, 1879, Dr. Schüssler, of Bremen, describes a successful application of nerve-stretching to a case of mimic spasm of the left side of the face in a lady of thirty-nine. All other treatment having proved unavailing, and the severity of the twitchings being such that the patient's health was suffering from the disturbance of her nightly rest, he exposed the trunk of the facial nerve, with antiseptic precautions, separated it from its sheath, and with a hook forcibly pulled it outwards. After one or two attempts the twitchings, which at first were excited by touching the nerve, ceased in all parts supplied by it except the angle of the mouth and neck. By stretching the branch supplying these parts separately the twitchings were entirely checked. It should be stated that the trunk of the nerve was in a congested state. The operation took place on January 23, 1879; on April 12 the paralysis of the left facial muscles caused by the nerve-stretching had disappeared, there were no twitchings, and the patient could feel perfectly everywhere except in the lobe of the left ear. She was well in every respect except that at intervals of ten to fourteen days she felt pain in the left brow and upper part of the left cheek, which was worse at the monthly period. She had experienced similar pain, but much more frequently, before the operation. On June 6, 1879, she reported that her health "left nothing to be desired." The twitchings, we should add, were first noticed in the summer of 1871. The second case is published in No. 48 of the same journal, 1879. A man of forty was admitted into the Berlin Lazarus Hospital under Dr. Carl Langenbuch on August 11, 1879, with symptoms of marked locomotor ataxy, with very severe "electric pains" in all the limbs, which could not be relieved by any sedative. The left sciatic nerve seemed the seat of the most intense pain, so Dr. Langenbuch began with that on September 13, operating antiseptically. The nerve-trunk was found on exposure to be injected and somewhat swollen. The stretching entirely removed the pain in that region, and the motor and sensory paralysis which resulted disappeared in a few days. On September 25 the right sciatic, and both crural nerves were stretched at a single sitting. The patient was thus not only freed from the pains in his legs, but *the symptoms of ataxy also ceased.* He was able after a short time to walk without assistance, with perfect control over the movements of his legs, and freedom from all disturbance of their sensibility. The arms, which were never affected to nearly the same extent as the lower extremities, and which had undergone no treatment, were still ataxic and painful at the time when Dr. Langenbuch wrote. The further progress of this case will be of great interest. It seems to be one in which the disease involves the peripheral nerves alone. Both in the case here given and in Dr. Schüssler's patient it may be said that it is only since the introduction of the antiseptic method that the operations described could have been attempted without great risk of dangerous after-effects.

ROYAL COLLEGE OF SURGEONS.

Messrs. Wood and Hulke have just resigned their seats at the Board of Examiners of the Royal College of Surgeons.

The Wyatt-Edgell Prize.—In reference to our paragraph of last week regarding this prize, we have to state that the subject proposed for the competitive essays is "The *Range* of Hereditary Tendencies in Health and Disease," and not the *Cause* of such tendencies, as we were asked to announce last week. Essays must be written in the English language, and must not be in the handwriting of the author. No essay must exceed 400 pages of 300 words on each page; and essays not exceeding 250 of such pages will be considered as most commendable in respect of length. Essays must be sent in, addressed to "The Secretary of the Sanitary Institute, 20, Spring-gardens, London, S.W.," on or before August 1, 1880. Each essay must bear a motto by which it may be identified. The prize (£200) is open for competition to all persons of either sex of any country. The adjudicators (Drs. B. W. Richardson and William Farr) wish specially to intimate that those essays which keep most closely to the text of the subject will be preferred.

Tight Lacing.—The evils of tight lacing amongst women, though considerably modified in the present day, are not entirely banished. Mr. William Carter, Coroner for the Eastern Division of Surrey, held an inquiry on Saturday last, at Upper Norwood, into the circumstances attending the death of Emma Plant, aged nineteen years, who died suddenly near the Crystal Palace. It appeared from the evidence that the deceased, who had been in the service of a gentleman residing near Gipsy-hill, had been out, and on returning became suddenly ill, and died in a few minutes after being attended by Dr. Gandy. A post-mortem examination was made, and evidence was given to show that death had been accelerated by tight lacing. The young woman's waist was extremely small. Dr. Gandy stated that one of the ventricles of the heart was so small as to impede the circulation of the blood; death arose from that cause. The jury returned a verdict in accordance with the medical evidence.

Wholesale Medical Licensing.—We are so accustomed to deplore the existence of so great a number of medical licensing bodies in the United Kingdom, that it seems quite startling for this state of things to be held up as an example of moderation. The Censors of the Medical Society of the County of New York, however, in a report on the subject in that State, observe—"In the whole of Great Britain there are, we believe, only about twenty licensing bodies, while in this State alone there are probably between 100 and 150. In this county there are at least twelve bodies that habitually exercise this power."—*New York Med. Record*, November 22.

REMINISCENCES OF THE OLD ROYAL INFIRMARY OF EDINBURGH.

(*Concluded from page* 18).

Hitherto our description has been of the Hospital and its arrangements, the *locus;* but what of the *genius loci*, or, rather, *genii*—for the spirits were many, and of a beneficent type?

The poet has sung, "Stone walls do not a prison make," and assuredly magnificent architecture, the most careful construction and thoughtful adaptation, invaluable as these are in their own place, do not make a hospital. It is on the medical and surgical staff, and on the manner in which they do their work, that the usefulness and fame of such an institution must mainly depend. And however old-fashioned and dingy the original Infirmary may look now, the work done in it will compare with that of any hospital, past or present.

Let us look back on the service of the Royal Infirmary at the time we speak of. As we are in the surgical department, we will save ourselves the trouble of coming upstairs again by beginning there. The surgical staff then consisted of two Acting Surgeons and one Assistant-Surgeon, the Professor of Clinical Surgery, and the Consulting Surgeons. The Professor of Clinical Surgery had no charge of wards, but wandered about at his own sweet will and lectured "at large" on the cases of the Acting Surgeons, making remarks on their treatment; and they, especially Mr. Liston, not unfrequently made remarks on him. The Professor was a tall thin gentleman of the old school, who wore a red wig, was always dressed in black, with a white neck-cloth—not a tie, but a choker of the "Beau Brummell" style (perhaps that exquisite might have condemned it as "a failure"). He indulged in a broad frill on his shirt-breast. The tailed coat was then the ordinary morning coat, so that was nothing conspicuous; but he considered it essential to maintain the style of knee-breeches, silk stockings, and shoes, though the muscular development of his lower limbs at that time hardly warranted its continuance. He lectured at 4 p.m. in a small room opening into the consulting-room, from a sort of pulpit, the benches immediately surrounding which were seldom crowded, owing to the retiring character of the students of that period; and, although he was most polite in pointing out the vacant spaces to those he saw standing near the door, the same unfortunate modesty prevented them availing themselves of the kindly meant invitation. With all his peculiarities, we rather venerate the memory of the old gentleman, for such he emphatically was.

The Senior Acting Surgeon had also, among the attending Surgeons, the exclusive right of lecturing on clinical surgery as well as the Professors, and this right was continued until 1863, when the managers permitted all the Surgeons to lecture clinically, if they chose to do so. In our day the Professor and Mr. Liston, then Senior Surgeon, gave a conjoint course much to the advantage of the students.

The Consulting Surgeons were gentlemen who had previously been Acting Surgeons, who, on the expiry of their term of office, received this honorary distinction—which, however, many of them did not seem to covet; at least, they rarely attended. Indeed, whilst we were hospital pupils, we can only recollect one Consulting Surgeon who attended—the late Sir George Ballingall, who then, and for long years afterwards, was as regularly present at the hospital-hour as the Acting Surgeons. When we first knew him he was in the prime of life; his bright face, well-set figure, and military bearing are fresh in our memory still. He impressed us then; later on, in our early practice, and subsequently as a colleague, we learned to love and value him more the longer we knew him. Unselfish, ever ready to advise and lend the support of his presence to the young practitioner in cases of operations or emergencies, he had the esteem of all his professional brethren, and is still held in grateful remembrance by those who survive of what was then the rising generation. The two Acting Surgeons at that time were Robert Liston and Dr. John Campbell. Of the former we need not say much. To say "Robert Liston" should be enough—a great surgical genius, unrivalled as a bold and dexterous operator, and not less skilful in the diagnosis and treatment of surgical disease. We have seen and known many great surgeons, but we have seen none in all respects his equal, and we look back with gratitude to instruction received from him alike in the lecture-room and in the hospital. His handsome powerful figure, his coolness, presence of mind, and readiness of resource in emergencies, are things to be remembered. He had his failings (not in surgery): his temper was not quite angelic and rather uncertain. If things were going on well, with his patients he was as pleasant as possible; but if any special case or cases were going wrong, the less you came in his way then, the better. Besides his professional talent, Liston possessed great tact, and his general attainments and social qualities brought him into contact with many of the eminent men of his day in Edinburgh, especially with the band of young literary men and others whom Christopher North had rallied round him. In the original "Noctes Ambrosiana," Liston figures under the title of the "Great Northern Anatomist." His colleague, Dr. John Campbell, was a gentleman of an old family, amiable in manner and possessed of a quiet dry humour that broke forth ever and anon, to the amusement of those who followed his visits. He was a well-informed surgeon, not a brilliant, but fairly good operator in ordinary cases. His private practice was more general than surgical. The Assistant-Surgeon, John Lizars, is well known in the annals of surgery. Bold and fearless, almost reckless, as an operator, his knowledge of after-treatment was scarcely equal to his operative dexterity. He was the first in this country to carry out in practice the operation of ovariotomy, which had been suggested by his former master, John Bell, and he did so in the face of a professional opposition which would have daunted most men. In vaunting the successful results of ovariotomy in the present day, the honour due to Lizars for what he did under great difficulties is too much forgotten, or only grudgingly acknowledged. We cannot say we saw much of him in the Hospital as Assistant-Surgeon. He taught both anatomy and surgery, as was allowed then, and, his time being thus occupied, he seldom appeared except on operation-days. The two Acting Surgeons divided the cases between them, one taking one side of each ward, and the other the opposite side. Both Surgeons visited at the same hour, and so each passed with his staff and following of students, the Surgeons wearing white linen aprons, whilst the dressers were distinguished by blue checked aprons. As venesection and cupping were then in fashion, a certain number of dressers from each Surgeon's staff were told off weekly for the purpose of bleeding patients in the medical wards, and to assist the visiting Cupper of the Hospital, and they generally had plenty to do in both methods of depletion. We wonder how many clerks or dressers of the present day have either seen, or themselves performed, venesection or cupping.

One arrangement of the surgical service at that time was most faulty. The appointment as Acting Surgeon was only for five years, and was seldom renewed for more than two years, so that his services were lost to the Hospital and public just when they were becoming most valuable. And it must have lost good men to the city. The late Sir William Fergusson told us that it was this which principally induced him to leave Edinburgh. Things are somewhat better now, as the appointment of Acting Surgeon is for ten years, and re-election is generally five years. The Professors of Surgery and Clinical Surgery have also special wards appointed them by the managers.

The medical wards were more numerous than the surgical, and the number of the medical staff was proportionally great. The medical department was divided into University clinical wards and ordinary Physicians' wards. The former were in charge of Professors of the Medical Faculty who chose to lecture clinically; the latter were in the service of the ordinary Physicians, the senior of whom had the right to give the clinical lectures if he chose to undertake that duty, or failing him the next Physician in order of seniority.

We may as well confess at once that our recollections of the medical department are more hazy than in respect to the surgical, because the number of Acting Physicians was considerable, and the Consulting Physicians were more frequently present; we are therefore more liable to be confused with regard to those in charge of the wards at this particular time. There were, however, some sufficiently prominent to fix themselves on our memory either by their peculiarities or

their special excellencies as teachers. Thus, we recollect well, in the University Clinique, the veteran Professor of Practice of Physic, who in his visits maintained the old dignified custom of delivering his remarks in Latin, and who vexed the souls of his clerks by dictating wonderful prescriptions, with long directions for their administration, in the same language. He was *very* deaf, but did not think so, and hence there sometimes arose amusing *contretemps* and scenes. Dr. Andrew Duncan, or "Dr. Duncan junior," as he was called; Dr. Graham, Professor of Botany; and Dr. Alison, then Professor of the Institutes of Medicine, were also clinical lecturers in the University Clinique, and so we think was Dr. (now Sir) Robert Christison—though our recollections of "the Young Professor" are more connected with Queensberry House Fever Hospital than the Infirmary at that time.

The ordinary Physicians were Dr. Spens, Dr. Short, and Dr. Patrick Borthwick. Dr. Spens was a tall, thin old gentleman. He did not deal much in physic or heroic remedies; his results, however, were very successful.

Dr. Short had served in the Medical Department of the Army, and had been one of the medical attendants of the Great Napoleon at St. Helena. Owing to that circumstance, or perhaps from his habit of crossing his arms on his breast and posing *à la* Napoleon, he was very generally known to the students as "Napoleon," or "Napoleon Short." In the wards he was rather fond of trying new remedies, and of getting favourable results by putting leading questions to the patients. He occasionally was peculiarly emphatic in giving directions as to treatment—a habit he may have acquired during his military career, for we fear that long after Uncle Toby's day "our troops swore terribly" in other places than Flanders. When we first knew him he was in our eyes the beau-ideal of a successful fashionable physician. Sometimes we saw him in chariot and pair; then in a smart cabriolet, with high-stepping horse and a tiger hanging on behind; not unfrequently he rode *à la militaire*, with the tiger on horseback at respectful distance. We confess to having envied him. Alas! we were young then, and had not sufficiently considered the apostolic injunction "not to look on things after the outward appearance," nor studied the meaning of the "*vanitas vanitatum*" of the Royal Preacher. Like his great patient, the battle seems to have gone against him in the end; for after being absent from Edinburgh for a time, on our return we missed the familiar form, and were told that he had left the city. Like Napoleon, he died, we believe, at a distance from the scene of his former glories.

Dr. Patrick Borthwick was a pleasant, gentlemanlike physician, but of his peculiarities or success as a physician or clinical teacher we cannot profess to speak, as we cannot remember even attending his visits. Of the ordinary Physicians, the one most followed was Dr. James Gregory, a comparatively young man, a son of the great Gregory. He was devoted and earnest in his work, and took great pains to teach the value of the discoveries of Laennec in their application to diagnosis of chest diseases. He was a man of great promise; but cut off in early life by an attack of typhus fever, he was prematurely lost to the profession. In regard to the position of the ordinary Acting Physicians at this time in relation to teaching and consulting practice, there was something so different from what obtains at the present time, and has always obtained in other schools, that we confess the subject has long been and still is a puzzle to us. In our student-days not one of the ordinary Physicians of the Infirmary lectured on practice of medicine, though Dr. Mackintosh, who never held a Hospital appointment, had overflowing classes on that subject. Then, as to consulting practice, Abercrombie, John Thomson, Sanders, and Begbie senior, who were the principal consultants, had never been Hospital Physicians. Things are different now, and seem to have been different before our day, for Hamilton senior had a good consulting practice.

Amongst the Consulting Physicians one form stands prominently out in our remembrance, though not so frequently present in the wards as others. If you were a stranger in Edinburgh, and had happened to visit the Infirmary, you might have encountered, in the hall or on the stair, a vision which would have caused you to question whether or not you were dreaming, or whether you saw the ghost of some ancient physician revisiting the scenes of his earthly life, for there, in cocked hat and court coat, knee-breeches, silk stockings, and shoes with silver buckles, comes a smart old gentleman who moves with a half-shuffling or gentle dancing motion, his toes slightly turned out. His silks fit closely to his well-formed legs; you note the ruffles at his wrists overhanging the gloveless hands—white and delicate, but always gloveless. As he passes, you perceive that his hair is powdered, and that down his back hangs a carefully-dressed queue. If curiosity prompted you to follow the apparition into the street you would find that it created no sensation, for it is a familiar presence there. It is no ghost, but Dr. James Hamilton senior—"Hamilton on Purgatives" of aloetic memory—"Cocked-Hat Hamilton," or, briefly and affectionately, "Cocky Hamilton." Dr. Hamilton had been long one of the Physicians of the Infirmary, and, even when we recollect him, still enjoyed a good consulting practice, and was much beloved by all classes. He never doffed the dignified dress of his early days, and it became him well. We said he never doffed that style of dress, but we should have added, in Edinburgh. For our own part, we could not have believed he could have worn any other; but (we have it on the authority of Dr. Tweedie, who had been his Resident Physician in the Infirmary), that, some years after he settled in London, a gentleman was shown into his consulting-room. There was something in the gait and manner of the stranger singularly familiar, but Dr. Tweedie felt at a loss, for the gentleman was dressed in ordinary morning dress, and carried in his hand a modern hat. "Oh," said he, "you're not sure of me: I'm Dr. Hamilton, but when I come to London I don't want to be mobbed, and so I dress like the rest of you."

We must close this long chapter on the original Infirmary, the Hospital of our student-days, but before we proceed to speak more briefly of the gradual extension and more modern phases of what is now the Old Royal Infirmary we close our eyes to shut out all surroundings, and try to recall, as in procession, the forms once so familiar to us there.

Let the younger men pass first. The Surgeons, Liston and Campbell: the former tall and powerful in form, dressed in dark bottle-green coat with velvet collar, double-breasted shawl vest, grey trousers, and Wellington boots, the thumb of one hand stuck in the arm-hole of his vest, comes along in an easy-going way, chewing an orange-wood toothpick. Beside him comes Campbell, tall and powerful also, but looking small by contrast, with a good-humoured smile upon his face, possibly making some jocular remark to Liston; and if Lizars be with them, they are probably bantering him on some hunting exploit—for Lizars, like Liston, was a Nimrod famous for "going at anything," but frequently coming off his horse involuntarily, and so is joked at. Following at a distance come the military figure of Sir George Ballingall and the frailer form of the Professor of Clinical Surgery. And now from the University medical wards come the well-known forms of Christison, Alison, Duncan, and Home; whilst from the ordinary Physicians' wards come James Gregory, Borthwick, Short, and Spens. The old courtly form of Dr. James Hamilton comes along with its gentle dancing walk, and closes the procession—the link in a chain of Old Infirmary worthies which connects the early part of the present with a time far back in the preceding century.

Some Defects of Guildford.—Guildford is a very favoured town in many respects, being well situated in a lovely county, and at a very convenient distance from London; but the management of the town appears to be decidedly behind the times in some important points. An inquest was recently held at the Town Hall there, before Dr. Stedman, on the body of Mrs. Louisa Bowler, who was seen to stagger and fall in one of the strects, and who, being unknown, was taken to the police-station, where she expired before the divisional surgeon could be summoned. The evidence of Mr. Henry Sharp Taylor, surgeon, of Guildford, who made a post-mortem examination, showed that death was due to a fainting fit induced by the diseased state of the heart, liver, and kidneys. The witness complained that the body of the deceased had been removed to a common stable, and he had had to perform the post-mortem examination in a place which, from its extreme darkness and wretched condition, was quite unsuitable for the purpose. The jury returned a verdict of "Death from natural causes," and appended a strong recommendation to the local authority to provide a mortuary for the town.

QUERIES IN MEDICAL ETHICS.

(*Concluded from page* 618.)

Q. How should the rate of remuneration be regulated at which medical men are paid for their attendance on public charitable institutions?

A. This will depend upon a variety of considerations—such as the nature and the means of the institution itself, and the amount of knowledge, skill, trouble, risk, and responsibility implied in the appointment. Probably the only approximation to a general rule that could be applicable on the subject would be that their compensation should, if possible, bear the same ratio to the average annual income of practitioners of similar experience, standing, and reputation in the same town, that the time or portion of the year necessarily occupied by the duties involved in the appointment bears to the entire year and its income.

A good deal might be said both for and against this rather commercial mode of viewing the matter, but I believe that on an impartial consideration it will be found to be as fair a rule as any that could be suggested, and that it will give, if applied to existing instances, results approximating very nearly to the salaries that are actually paid in the medical departments of most public institutions.

Take, for instance, the General Dispensary and Vaccine Institution of this town, each of the medical attendants of which receives a sum varying according to circumstances, but averaging, I believe, about £45 per annum. The average annual professional income of medical men of their status in this town would, I imagine, be about £250 or £300. The time occupied by their dispensary duties is about one hour daily in prescribing for patients at the Institution, and say one hour, or possibly a little more, daily in visiting at their houses such as are too ill to attend, and in consulting and arranging as to the treatment and assistance they require, and of otherwise promoting the objects of the charity. The question, then, should be stated thus: If a medical man receive £250 for his whole time (say twelve working hours per day), how much should he receive for two hours and half?

$$12 : 250 :: 2\tfrac{1}{4} : 46.$$

If it should be said that from the more disagreeable nature of the duties, and the greater risk of infection, incurred by the medical staff of this and similar institutions than in private practice, a higher rate of remuneration ought to be given, it may be alleged on the other hand that there are many contingent advantages involved in their appointments, which, with a person of tact and intelligence, will more than compensate for any disadvantages that might be attached to them.

Subject to the same test the medical attendance on the parochial poor, the prisons, and the various charitable institutions in this town that have a medical officer on their staff, and the results will be found not materially to differ from the sums that are actually paid in these instances. But there is one great class of charitable institutions—viz., public hospitals—which belong to a different category, and in reference to which good reasons could be adduced against the payment of salaries to their medical attendants.

Q. How can it be shown that the hospital occupies a position so different from other charitable institutions as to justify the apparent anomaly of allowing no salaries to its medical officers?(a)

A. The reasons for this seemingly abnormal arrangement may be based upon three broad and distinct grounds, namely—first, the Christian and intrinsic character of the institution itself; secondly, the counterbalancing advantages accruing to the medical attendants themselves; and thirdly, the policy of such a course both as regards the interests of the public and of the profession generally.

A very slight glance at the history of the world and its civilisation would be sufficient to prove that it is to the genius of Christianity that the hospital owes both its origin and its continued existence. Jesus Christ not only confirmed and sealed those heavenly doctrines by which the Christian religion is distinguished above all others by a continued course of deeds—often miraculous—of benevolence and mercy, not the least striking of which were the alleviation of the temporal necessities of men, and the healing of all manner of sickness and diseases,(b) but He laid down this species of beneficence as in the highest degree obligatory on His followers, and in fact constituted it as the great and decisive test of the genuineness of their Christianity. "When the Son of Man shall come in His glory, and all His holy angels with Him, then shall He sit upon the throne of his glory, and before Him shall be gathered all nations; and He shall separate them one from another . . . . Then shall the King say unto them on His right hand, Come, ye blessed of my Father, inherit the kingdom prepared for you from the foundation of the world: for I was an hungered, and ye gave me meat; I was thirsty, and ye gave me drink; I was a stranger, and ye took me in; naked, and ye clothed me; I was sick, and ye visited me; I was in prison, and ye came unto me. . . . . For inasmuch as ye have done it unto one of the last of these my brethren, ye have done it unto me" (Matt. xxv. 31, etc.). "The Apostles also," says Paley ("Moral and Political Philosophy," page 157), "describe this virtue as propitiating the Divine favour in an eminent degree. And these recommendations," he adds, "have produced their effect. It does not appear that before the times of Christianity an infirmary, hospital, or public charity of any kind existed in the world; whereas most countries in Christendom have long abounded with these institutions."

The very name—"the House of God"—which is still retained by several of the oldest, the most extensive, and most celebrated of these institutions (such as the Hôtels-Dieu of Paris, Aix, and Troyes) is sufficient to attest their religious and Christian origin. Originally they were not only under the superintendence and management of the clergy, but the very functions now pertaining to the physicians and surgeons were performed by them gratuitously, and as part of their religious duties.

When to these facts we join the consideration that it is to the hospital in a great measure that the science and art of medicine owe their present high development, instead of holding up to ridicule such rude specimens of clerical medicine and surgery as the records of mediæval times have handed down to us, we ought, on the contrary, to feel a deep debt of gratitude to the Church as being at once the foster-mother and patron of our art. Although the offices of the priest and physician in this country are now very properly disjoined, it does not therefore follow that the latter functionary has been relieved from the obligations under which everyone is laid whose privilege it is to live under the latter and better dispensation.(c) To do good unto all men, according to the means and opportunity which God has entrusted to us, is a duty plainly and repeatedly enjoined in Scripture; and "of all private professions," says Paley ("Moral and Political Philosophy," page 157), "that of medicine puts it in a man's power to do the most good at the least expense. Health, which is precious to all, is to the poor invaluable." And their complaints, when properly understood, are in general such as readily yield to medicine. To the credit of our profession it is, I believe, almost universally admitted that the great body of it does, generally speaking, recognise and perform their duty in this respect. And that the attendance on a hospital may be fairly ranked among this class of duties it will not be very difficult to prove.

(a) In a report made to the Committee of Management of the Aberdeen Royal Infirmary, in 1847, it was stated that, in answer to queries sent to fifty-eight different hospitals, forty-two in England, exclusive of London, had, in reply to whether their medical officers received salaries or not, inserted the word "No." Of the London hospitals there were eight in which no salaries were paid, and only two (old and richly endowed institutions) in which they were. In five hospitals in Scotland the medical officers were paid; in all the rest they were not. For further particulars as to these returns, see the *Aberdeen Journal* for September 18, 1850, which contains the report of a meeting of the managers of that Hospital, when the question was again brought under consideration. Having on that occasion had my attention directed to the question by being asked to sign a memorial on the subject, I made it a matter of conscience to turn over in my mind the various arguments that could be adduced on either side, and the result was embodied in the answer now given to the query, though I confess, on now looking at it again, that it has a little too much the appearance of special pleading. Though adhering to the views expressed in this query, I took no prominent part in the discussion, partly in consequence of the acrimonious, and in some cases vindictive, feelings excited in one or two of the medical gentlemen then holding office in the Infirmary. Indeed, this is the first time the paper has been read or made public in any way, though it was written upwards of twenty years ago. Now that the old salaries have been withdrawn, and remuneration put within the power of the medical man in a different form, I suppose few will deny that the result has been alike advantageous to the medical attendants, the profession, the public, and probably to the hospital patients themselves.

(b) Matt. iv. 23, 24, ix. 35, x. 1; Luke iv. 40; Acts x. 38.

(c) Gal. vi. 9, 10; 1 Peter iv. 8, 9, 10; 1 Cor. xii. 4, 5, 6, etc.

The benevolent public, actuated by Christian and philanthropic principle, provide the means of shelter, food, medicine, comfort, and recovery for those who are the proper objects of their charity. The medical attendant—who, be it observed, has most probably little or no opportunity, from the class of patients among whom his private practice lies, of exercising professional charity—with all the appliances and means of treatment furnished to his hand, with all the sanitary and other necessary arrangements provided for and strictly enforced, and with all the advantages which the division of labour and the most improved application of scientific principles can insure,—like the queen bee of the professional hive, fed and fashioned into his proud pre-eminence by the honey of experience supplied to him by his brethren and the public,—spends a small portion of his time, generally about an hour in the day, and in many cases not more than one hour in two or three days, certainly not a greater portion of his time than the generality of the profession are almost unavoidably in the daily habit of devoting to unpaid(d) charitable practice, in conferring the benefit of his medical or surgical skill on that portion of the poor patients committed to his care. In thus contributing his part towards the benevolent object of this great Christian institution, the medical attendant should consider it derogative to the honourable position he is privileged to occupy to accept of any part of the general or charitable funds of the establishment, and should, independently of the many concurrent and contingent advantages accruing from hospital practice, feel himself sufficiently rewarded by the consciousness of performing a religious and social duty, and by the blessing of those who are ready to perish, which will frequently come upon him.(e)

These arguments of course are not meant to apply to such officials as treasurers, clerks, apothecaries, matrons, nurses, porters, and the domestics generally, whose time is wholly, or to a great extent, devoted to the hospital, whose livelihood is dependent upon it, and whose services are at all times at the command of the higher functionaries of the institution.

The argument against official salaries to the medical staff of hospitals, thus drawn from the peculiarly Christian character of the institution, will possibly appear to some to be far-fetched, fanatical, and irrelevant, though with others I trust it will outweigh the others which remain to be adduced, numerous and diversified as they are.

In the case of military and naval hospitals, and of such civil ones as are situated in poor and remote districts, that could present no field for general practice, if there be any such, the system of no salaries would evidently be impracticable, as without remuneration, and that too on a liberal scale, it would be impossible to secure the services of properly qualified attendants.

FROM ABROAD.

Hospital Pay-Patients.

As the reception of patients on payment at our hospitals will probably be soon attempted as an experiment in some form, it may be interesting to contemplate some of the abuses and difficulties which the system has given rise to in the United States. With this end in view we transcribe the following editorial observations from the *New York Medical Record* for November 8:—

"With very few exceptions, all our public institutions receive patients who are expected to pay for the accommodations and treatment which they receive. The income derived from this source is devoted to the interest of the hospital, and to the striking a balance in favour of such patients as are admitted as paupers. This is perfectly proper when confined within certain limits. But not content to meet the requirements of patients who are willing to pay a small sum and maintain a certain independence, the managers provide extra accommodation for patients, for which proportionally heavier rates are charged. For instance, some of the private rooms are held at from $25 to $50 per week, according to extras which may be furnished in the shape of private medical attendance, private nurses, etc.; and yet these patients are expected to maintain the same relationship to the medical staff, regarding pecuniary compensation, as the veriest pauper who, for pure charity's sake, is admitted to medical treatment. It requires no argument to prove that this is a flagrant abuse of medical charity. While the profession are perfectly willing to give their services to the very poor, or even to those who can do no more than pay a nominal sum for their board in a hospital, it is certainly an abuse of such generosity to ask members of the staff to give their time and attention to the treatment of patients who can afford to be luxurious, who demand private apartments, and who are able and willing to pay liberally for them.

"It may with some show of justice be claimed that an institution which can, under the name of charity, provide such extras for well-to-do patients must necessarily make the care of the sick and needy secondary to mere pecuniary considerations, and to the maintenance of a first-class hotel, with medical attendance free. As a rule, when a well-to-do patient applies for admission into any of these institutions, if he is willing to pay for his accommodation, no objections are offered by the superintendent. On the contrary, the latter seems only too willing to seize the opportunity of thus increasing the income of the hospital. While it may with truth be said that the managers would not directly interfere with the receiving a medical fee from such patients, they are so far from encouraging that practice that it is barely tolerated. So much is this the case, that it would be difficult to foretell the result should any attending physician or surgeon of the institution refuse to attend these extra-paying patients unless he received his usual fee for so doing. It is true that the visiting staff are supposed to give their services free to hospital patients. So far as it is an act of charity, this is perfectly well understood; but a patient ceases to be an object of charity when he is able to pay $50 a week for a private room. If the hospital has a right to accept such extra pay for accommodations under the name of a charitable institution, there can certainly be no blame to the physician for making a proportionate claim. And yet it is said by the hospital management that if such a precedent were allowed, an unjust distinction might be made in favour of such patients who could afford to pay the most. While this objection might apply to nurses, it certainly would not do so to the doctor, who, while in attendance upon a case, discharges his duties with as much conscientiousness to a pauper as to a king.

"It is well known that certain persons come to the hospital as private patients to the attending physician or surgeon, and that the usual fees are then charged. On the score of equity, there can be no possible objection to this. The physician or surgeon is entitled to his fee the same as if he treated the patient in an hotel. The advantages to both, however, are obvious in the increased facilities which are offered in a hospital for the treatment of diseases, and especially when operations are required. But there are patients who frequently come into a hospital of their own accord, without any preference as to medical attendants, simply upon the general reputation of the institution, and the consequent guarantee which it gives for proper treatment. It is these cases which abuse the medical charity of the staff, and assume that they have discharged all their obligations when their extra bed and board are paid for. Not only do these patients impose upon the staff, but upon the profession outside the hospital. In this way the hospital, with perhaps the best of intentions, becomes indirectly an abettor of fraud, and invites the commission of the very abuses which by its avowedly charitable mission it ostensibly aims to prevent.

"How to remedy the evil is, as we have before intimated, somewhat of a problem. The hospitals are not likely to abolish the system of pay-patients, neither are the profession ready to say that with proper regulations the paying system in these institutions is not productive of great benefit. But where to draw the line, and how to do it, are not such easy matters to determine. We take the ground to start with, that no patient able to pay for medical services should receive them for nothing, whether he be in a hospital or not. Every hospital physician or surgeon owes it to his profession to take a similar position. It can scarcely be supposed that

(d) See *Medical Gazette*, vol. xv., page 123.

(e) Even an infidel or atheist physician would be bound by the most obvious maxims in ethics to conform himself in this and other respects to the governing and fundamental principles of the institution to which he is attached.

the managers of any hospital will insist upon a member of the staff rendering gratuitous services under such circumstances, but that they will be willing to listen to reasonable suggestions as regards the remedy. At first it might seem that a pay-patient entering the hospital, without any special preference for a medical attendant, is under pecuniary obligation to the hospital alone for all the benefits he receives. Whether the hospital or the attendant should receive the fee is a question between the managerial board and the staff. It would seem just, however, when the hospital receives pay for extra accommodations, that the staff should be compensated at ordinary rates for their services, which are really in the shape of extras to patients who can pay."

Prolapsus of the Ovaries.

At the meeting of the American Gynæcological Society, held at Baltimore (*New York Medical Record*, October 18), Dr. Paul Mundé, of New York, read a paper upon the above subject, restricting his remarks to intrapelvic dislocation of the normal or only slightly enlarged ovaries. The paper is based upon observations made on 1600 unselected gynæcological cases, and is terminated by the following conclusions:—

"1. The subject of prolapse of the ovaries is one that has not received, in the text-books and periodicals, the attention which its importance as a separate affection demands. 2. Ovarian prolapse, owing to the normal mobility of the organ, is a very common affection, frequently accompanying retro-displacement of the uterus; and in by far the larger number of cases the displacement is backwards into Douglas's pouch. 3. The normal, not markedly enlarged ovaries, are frequently prolapsed, either in consequence of retro-displacement of the uterus, sudden jarring of the body, puerperal sub-involution, or menstrual congestion. More frequently still does prolapse occur in consequence of moderate enlargement of the ovaries, through engorgement or inflammatory hyperplasis. 4. Their prolapsed conditions cause even normal ovaries, in time, to become hyperæmic, hyperplastic, and hyperæsthetic—partly through vascular obstruction, and partly through the injuries to which they are subjected during defæcation and coition. Already enlarged and degenerated ovaries, for similar reasons, undergo a more rapid pathological change in consequence of displacement. 5. In rare instances displaced ovaries have been found to become spontaneously replaced; thus, after the cessation of menstrual engorgement, and through accidentally favourable positions of the patient. As a rule, however, a displaced ovary requires replacement by artificial means. 6. The symptoms caused by displacement of the normal ovaries, while more or less vague, are sufficiently severe to attract the attention both of the patient and the physician. 7. The diagnosis of ovarian prolapse is exceedingly easy to the practised touch by the vagina or rectum, or by combined manipulation. 8. The treatment consists in replacing the organ manually or by position, or by replacing the uterus if displaced (which is readily possible if the ovaries are not adherent), and then retaining them in position by tampons or properly constructed pessaries adapted and moulded according to the needs of each individual case. If feasible, it is first advisable in every case to endeavour to relieve the hyperæmia and hyperplasia, as long as the organs are readily accessible. 9. Much ingenuity and patience may be required to devise proper means for supporting the inflamed and tender ovaries, which, once replaced, should be treated by the well-known remedies for chronic ovaritis. 10. If the ovaries are adherent, the treatment resolves itself into antiphlogistic and narcotic measures. In cases of great local or constitutional disturbance, the last resort—their removal—might be suggested and adopted."

At the discussion which followed, Dr. Fordyce Barker observed that attempts at replacing the prolapsed organ are not always successful, yet it is always worth while to make the trial; and for overcoming plastic exudations he suggested hot water injections and the use of mercury in the form of minute doses of the protoxide continued for some time. To retain the organ in position he recommended the cotton tampon aided by a solution of tanuic acid, equal parts with water. To correct the habit of constipation he was accustomed to give a laxative composed of equal parts of sulphate of magnesia, carbonate of magnesia, tartrate of potassa, and sulphur. Dr. Busey, while corroborating the views of the author of the paper, said that his experience led him to believe that structural changes in the ovaries were secondary, and usually secondary to displacement of the uterus. He thought that external abdominal support acted by restoring the equilibrium of pressure which the superincumbent viscera exerted on the pelvic organs. Dr. Albert Smith was of opinion that if prolapse of the ovaries received more attention, and was submitted to more careful examination, there would be a fewer number of patients going about from one physician to another, and being submitted to various forms of treatment. He believed that in most cases of prolonged pelvic trouble of a painful character, in which various methods of treatment had been adopted without benefit, prolapse of the ovaries was the pathological condition present. He had not seen good results from the treatment by pessaries, and had obtained the best results from the use of a simple bag of tarlatan stuffed with tannic acid. There were many cases that could not be relieved unless by means of Dr. Battey's operation.

REVIEWS.

The Principles and Practice of Gynæcology. By Thomas Addis Emmet, M.D., Surgeon to the Women's Hospital of the State of New York, etc. London: J. and A. Churchill. 1879. Pp. 855.

In his recent speech at Rochdale, Mr. Bright quoted a remark about America made to him by a sagacious public man. It was to the effect that "over there they sometimes talk a great deal of nonsense, but they generally act very wisely." This pretty well expresses our feeling with regard to the book before us. The wide reputation of the author makes its publication an event in the gynæcological world; and a glance through its pages shows that it is a work to be studied with care. Judging from it we should say that Dr. Emmet, like those Americans whom Mr. Bright's friend met with, sometimes talks a great deal of nonsense, but generally acts very wisely.

The great experience in the diseases peculiar to women which Dr. Emmet has had, his ingenuity in devising operations, and skill in executing them, are known to all who keep themselves informed of the progress made in that department of our art. It was therefore to be expected that the book would abound in useful hints concerning the surgical part of its subject. For almost every gynæcological manœuvre the author has an appropriate instrument, many of which, as they differ in some slight detail from the kind used by other well-known operators, he calls after himself. Thus we have Emmet's tenaculum, probe, elevator, applicator, knife, scissors, needleholder, forceps, etc., etc. The differences between these, and similar things called in England by other people's names, are so small, that whatever trifling advantages they may have are only to be appreciated by those who use them very frequeutly indeed. We notice the same kind of thing with regard to operative proceediugs and manipulative treatment, much stress being laid on what seem to us very insignificant modifications of old and well-known remedial measures. There is often given to the discussion of these little things a share of space very large as compared with that devoted to the far more important questions, Is the treatment worth carrying out at all? and if so, when?—questions to which it is only too often the case that a satisfactory answer cannot be given.

Dr. Emmet, as is well known, had for long Dr. Marion Sims as his colleague. It is remarkable how very different in their estimate of common modes of treatment these two well-known surgeons sometimes are. Thus of Dr. Sims's curette, Emmet says, "As regards the instrument. . . . I honestly believe that the ingenuity of man has never devised one capable of doing more injury and as little good" (page 611). Dr. Emmet seems rather given to strong statements. Thus at page 74 he says, "A Simpson's sound is of no value in my hands for any purpose, and I have for many years abandoued it as a dangerous instrument." We fear there are many benighted physicians in this country who constantly use the thing so strongly condemned, and imagine it to be of service in diagnosis, and as safe as any other kind of uterine probe.

A novel feature in the book is the number of tabular statements which it contains. These tables have evidently been

compiled with great labour. They are not absolutely useless, for they furnish averages which may hereafter be useful to someone else. But we say, without hesitation, that the result of all this labour is very little. The author himself often does not seem able to make even such slight use as he might of this kind of statistical statement. And some of the tables seem absolutely devoid of any scientific utility whatever. For instance, we have a table of "menstruation as affected by cellulitis" (page 265), giving the percentage of cases in which menstruation was altered in length and quantity, or in quantity alone, or was unchanged; and these groups are again divided according to whether the flow was increased or lessened, or became irregular; and whether the patients in whom these changes occurred were single, sterile, or fruitful; and whether the cellulitis was to right, to left, behind, or around the uterus. Now, pelvic cellulitis, under which term the author includes also pelvic peritonitis—for he says (page 256) that he "cannot make any distinction between them at the bedside,"—is a disease so rarely idiopathic that some would say it *never* arises without some antecedent disease or injury. This being so, how can we tell whether the changes in menstruation were the result of the condition causing the cellulitis, or of the cellulitis itself? The same thing is elaborately done as to versions, flexions, fibroids, etc., conditions in which, although the uselessness of such tables is not quite so evident as in cellulitis, yet they seem to us about as valuable as it would be to draw up similar statistical tables of, let us say, the number of coughs and amount of expectoration per twenty-four hours in a number of miscellaneous cases of vesicular emphysema. Disordered menstruation is, like cough and expectoration, a symptom, and nothing more: one which has many causes and is affected by many other conditions, transient or permanent, beside the one which may directly lead to it; and the importance of which entirely depends upon its cause. And what do we learn from a long list of 202 vesico-vaginal fistula operations, briefly reported without information as to details? Everyone knows that prolonged pressure of the fœtal head in childbirth is a cause of this condition, and that the operation will cure it. If the object were to settle any point upon which different opinions are held, the list might be of use; but nothing of the kind is attempted. And in other parts of the book we have individual cases—some of them of operations rarely desirable and never necessary—reported at enormous length, the interest of which wholly consists in operative details, and which teach nothing whatever, except that Dr. Emmet is an ingenious operator—*e.g.*, pages 213-228.

The chief interest naturally attaches to those points which are new, or which Dr. Emmet has specially made his own, or which are at present the subject of controversy. The author's name is at present more particularly associated with the operation he has devised for the repair of lacerations of the cervix uteri. In our number for December 20, 1879, we drew attention to this subject. We then pointed out that the real question which calls for an answer is not whether lacerations of the cervix are frequent, or whether Dr. Emmet's operation will cure them, or even whether they cause and keep up inflammation of the cervix: on these points there is no particular reason for doubt. The real question is, whether they really cause symptoms so many and so grave as are in America attributed to them. Our own belief, into the reasons for which we need not again enter, is that the symptoms they cause are few and slight, if any. We turn, therefore, with much interest to the chapter on this subject, hoping to find some information on the point. We are sorry to say that we have sought in vain. No cases are narrated, and the part relating to the symptoms and pathology of laceration of the cervix is simply a string of assertions, without any attempt at proof. Dr. Emmet says (page 451) that "there is no proof that a single case became impregnated after the occurrence of the laceration." If this be the fact, either the author's experience is singularly one-sided, or American women differ strangely from their English sisters; for over here it is as common as possible to find women pregnant with old laceration and eversion of the cervix. At page 456 we are happy in finding a sentence, however, with which we agree. It is this: "The occurrence of cellulitis in connexion with, or as a consequence of, laceration of the cervix, is the most important, as it is the most frequent, complication." Our own suspicion is, that one way in which the importance of these lacerations has been magnified, has been by symptoms due to accompanying cellulitis or peritonitis (or some other disease) being put down to the lacerated cervix. Our author thinks that the frequency and importance of pelvic cellulitis (and under this term, as we have said, he includes cases which many would call pelvic peritonitis) is very much underrated. Thus he says (page 90): "Of all accidental causes [of disease], inflammation of the cellular or connective tissue of the pelvis, and especially that between the folds of the broad ligaments, is the most common; and next in frequency may be placed pelvic peritonitis and hæmatocele. These conditions are of far more frequent occurrence than is generally supposed by the profession. Often they are not recognised when existing, and their products, to be found long after the original disease has passed away, are almost universally overlooked." In these remarks we entirely concur, although we cannot follow his explanation of the effects which this disease produces.

The weakness of the book lies in the pages dealing with pathology. We constantly find that the sections in which the author expounds what he calls the pathology of morbid conditions consist of a string of inconsequent propositions made up of large abstract terms having no definite meaning. For instance, what do we learn from these?—"The exciting causes of disease during the developing stage of puberty are hereditary or acquired fulness of body, causing absence or arrest of local development, and disorders of the nervous system from impaired general nutrition" (page 76). "The acquired causes of disease are to be traced directly to faulty nutrition from which the balance was lost, after puberty, between waste and repair, leading to organic and functional derangement. From this loss of balance we have disturbances in the circulation producing hypertrophy or atrophy of tissues already formed, or the development of new growths, as tumours and maligant diseases" (page 78). There is hardly any disease to which the organism is subject, to which propositions so loose as these might not apply in some sense. And we cannot see, nor does Dr. Emmet point out, any definite way in which they apply to the uterus. We might quote many passages equally meaningless. The author seems as if he did not at all understand the nature of proof, or the need of some facts to establish an abstract proposition. He seems to think that an assertion is enough. Thus he says: "The girl . . . . as to her sexual development . . . . will certainly be more liable to uterine disease if her mother has been a sufferer in that direction. . . . . The daughter, if the eldest child, is less liable to local difficulties than she would be if born after other children, when her mother's health may have already begun to suffer" (page 78). This is quite novel; but we are not told on what evidence the statement is based, nor what are the forms of uterine disease which are thus inherited. And he seems also never to have heard of the familiar maxim, "*Post hoc non ergo propter hoc.*" At page 384 we are told, "I have known of several instances in which the existence of a scar on the perineum excited so much reflex irritation as to entirely change the disposition of the woman, and yet she was not conscious of any local difficulty"! The evidences for this astounding statement are not adduced. We might multiply quotations embodying bits of theory equally illogical and unproved; but we will pass on with the remark that either the author is not acquainted with general pathology, or he thinks it established that the uterus is an exception to the laws which hold good of morbid changes affecting the rest of the body.

We think we have given proofs enough to warrant our opinion that Dr. Emmet is among those Americans who "sometimes talk a great deal of nonsense." But with all this, there are many shrewd remarks which show that his practice is more reasonable than his theory. The following, we think, will commend themselves to the judgment of practical men:—"Unless the patient be suffering from inflammation, as from an attack of cellulitis, where rest is essential, she must be gotten out of bed and into the open air as soon as possible. There never was a greater fallacy in practice than to place in bed a woman suffering from uterine disease, with the expectation that she would recover her health by remaining there. The loss of tone to her general condition will be greater than any benefit to be gained from the confinement, even when combined with a well-judged course of local treatment" (page 105). "There are too many instances where women have become bed-ridden in conse-

quence of too much importance being attached to the local condition by the physician, or where he has failed to check by the exercise of a stronger will the growing tendency on the part of the patient to chronic invalidism" (page 107). But even in some of the cases which he narrates, and which show in his practice clear perception and wise conduct, he does not seem, from his remarks upon them, to have rightly grasped their pathological nature. He tells of one patient whom he cured by the novel prescription of "a hoop skirt and a black silk morning dress to be made in the latest fashion" (page 113); and of another whom he restored to health by threatening to play the part of a lady's maid, and dress her: "I then slowly enumerated, in order, every article of female dress I could think of, even to a napkin. This was too much for her, and she opened her eyes, saying, 'You are a brute, sir!' . . . . She became very much attached to me in a few days, and I never had a more tractable patient" (page 111). He does not seem to clearly recognise that cases like these are to be found mimicking every kind of disease to which the body is subject, and that there is nothing special to uterine disease about them. They are simply forms of our old foe, hysteria. On the contrary, he seems to us peculiarly unfortunate in his general remarks on this class of cases. He says (page 109), "It is not sufficient alone that the patient should have every confidence in the skill of her physician, for, in certain conditions of the nervous system, it will avail little without the personal influence. . . . I have laboured for hours and days, without the patient being conscious of it, to gain this influence *and to create a feeling of dependence*. . . . When necessary to accomplish it, I aim *to gain absolute and entire control over the patient*, to understand every thought and motive, and *to direct her as a child*. The sentences we have put in italics seem to us most objectionable. The cases which the author quotes show that he is not a quack, and that his single aim is the good of his patient. But the sentences we object to seem to us to contain the secret of the most mischievous form of quackery. That principle we entirely dissent from and abhor. It is the duty of the physician, as far as he is able, to make his patients healthy, strong, sound in mind and body, and not dependent upon anyone. If instead he labour to make them dependent on himself, he betrays the trust reposed in him, and degrades himself to the level of a priest. We do not believe that Dr. Emmet means this, but he has expressed himself in a most unfortunate way.

The most burning gynæcological question of the day perhaps is that concerning flexions: we therefore must not take leave of Emmet's book without some notice of his position with regard to this topic; the more so as, we think, he throws some valuable light upon it. He divides flexions (or "flexures," as he calls them) into flexures of the body and flexures of the cervix. The latter he looks upon as so constant a cause of sterility that "in future observation will establish the fact that the existence of a flexure of the cervix is to be accepted as proof that impregnation has never taken place" (page 330). He has an ingenious theory—as usual, vague and without a particle of proof—to account for its formation. There can, we think, be no doubt that these different classes do correspond to real differences in the shape of the uterus; and also that malformation of the cervix is often associated with sterility. The author, we think, has done well in insisting upon the difference between the two kinds of alteration in shape; in this his work is in the same line as that of Dr. Roper, embodied in a paper read before the Obstetrical Society of London last year. Whether the difference be important or not, it is certainly there. As to the treatment of flexions, Emmet is very emphatic; his assertions are so sweeping that we cannot but think they go beyond the mark. Thus (page 351): "Since the practice of indiscriminate division of the cervix was first introduced by Professor Simpson, more malpractice has been perpetuated throughout the world, in the name of this simple operation, than from any other procedure known to the profession." As to the intra-uterine stem, he says (page 352): "Experience will at least teach everyone that no permanent benefit is ever derived from its use; that no degree of tolerance is ever established; but that sooner or later, in almost every case, mischief will result." Upon surgical treatment, he is very definite: (page 353) "there are certain forms or conditions of flexure in which we must resort to surgical means for relief, and there are others in which it would be malpractice to employ them. It may be accepted as a truism, derived from experience, that in flexure of the uterine body no surgical procedure will be of the slightest use towards permanently removing the conditions, and that whenever practised, in the usual conditions, the life of the patient is thereby unnecessarily placed in jeopardy."

In the opening chapter there is a naïve remark concerning the author's compatriots. It is this: "profundity is granted to comparatively few, since the same mental application on which a German, in his own land, will thrive, will, in this country, impair the physical condition, or result in some nervous disorder" (page 18). Whatever degree of truth there may be in the general proposition here stated, this book certainly bears it out so far as the absence of profundity. It does not seem to us worthy of the great reputation of the author. But it must be borne in mind that the dexterity and readiness of resource in operation with which report credits Dr. Emmet, are qualities which cannot be demonstrated in descriptions. The book shows much industry, extensive observation, and shrewd common sense. The author is worth hearing when he is telling us what he has seen; but when he begins to expound pathology, he calls to our mind the advice said to have been given by a famous judge to a newly appointed magistrate, which was, "Never give reasons for your decisions: your decisions will be most likely right, but your reasons are sure to be wrong." The work is not in any sense an exponent of the scientific side of gynæcology; but as a record of the experience of a man who has seen much of his subject, and who, although he now and then indulges in sweeping general statements, yet seems on the whole careful to state the truth, it must always be a work to be carefully studied and frequently consulted by those who practise that branch of our profession.

Patents and Patentees. Volume X. Indexes for the Year 1875. Compiled by Richard Gibbs, Registrar-General of Victoria, Melbourne. John Ferres, Government Printer. London: Trübner and Co., Ludgate-hill. 1879.

By the courtesy of the Registrar-General at Melbourne we have received the volume for the year 1875, giving full descriptions and diagrams of the different inventions patented in the colony during the period in question. The volume furnishes an almost alarming proof of the diligence and productive power of inventors; but there can be no question that the publication will be very useful as well as interesting to all inventors and would-be inventors, and to those who may be on the look-out for new helps in various ways.

GENERAL CORRESPONDENCE.

TYPHUS AND TYPHOID FEVERS.

Letter from Dr. M. Charteris.

To the Editor of the Medical Times and Gazette.

Sir,—The position taken up by Dr. Stewart with regard to the priority of claim as to the discovery of the non-identity of typhus and typhoid, and his negation of Dr. Perry's right for any recognition in the matter, is somewhat amusing. He states "that he only claims what has been for thirty-nine years allowed, and is now for the first time disputed." Yet I find in the *Edinburgh Medical and Surgical Journal* for 1840, page 289, as quoted by Dr. Aitken ("Medicine," page 376, vol. i.), the following remark by a Dr. Stewart about a Dr. Perry, viz.:—"Dr. Perry was the first to maintain the complete difference of the two eruptions—namely, those of typhus and typhoid fevers." Can this be the same Dr. Stewart who now asserts himself so uncompromisingly? If so, it reminds one of the story told of the First Gentleman of Europe, who, by talking often with military men about Waterloo and its glorious victory, at last came to the conclusion that he was actually there, and commanded in person the British Army! I am, &c.,

Glasgow, January 5. M. Charteris, M.D.

The next meeting of the Society of Medical Officers of Health will be held on Friday, January 16, at 7.30 p.m., at 1, Adam-street, Adelphi, when a paper will be read by Dr. Tatham, Salford, "On certain Reforms which appear desirable in the Statistical Reports of Medical Officers of Health."

REPORTS OF SOCIETIES.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

FRIDAY, DECEMBER 19.

JOHN SYER BRISTOWE, M.D., F.R.C.P., President, in the Chair.

THE minutes of the previous meeting having been read and confirmed,

A letter was read from the Northumberland and Durham Medical Society respecting means for checking the spread of scarlet fever through public elementary schools, and it was resolved to explain the difficulties which medical officers of health experience in enforcing efficient quarantine regulations so long as the interests of the managers of schools conflict so with the oft-expressed opinions of this Society on the subject.

Dr. DUDFIELD made some remarks upon the provision of hospital accommodation for the non-pauper class suffering from infectious diseases. The Council were unable to give any advice in the matter so long as the term "pauper" was left undefined. The Local Government Board desire to ascertain the opinion of the vestries respecting the probable amount of provision required by them. They propose to co-operate with the Asylums Board in framing regulations. It is evident that great care will be required in differentiating between paupers and non-paupers. There are many who would be potential paupers, *i.e.*, willing to be pauperised, for the benefit accruing to themselves and the community.

Dr. TRIPE remarked that the Asylums Board are of opinion that 10 per cent. extra beds must be provided for the accommodation of non-paupers.

Dr. DIXON showed that each district must be gauged according to the class of people residing in it. In the City and West-end many would send their servants and work-people to avoid the spread of infection. Those who have no means of providing payment for medical attendance should be considered paupers.

Mr. LOVETT considers that the vestries will oppose the carrying out of this provision, because they will have to pay for the accommodation.

Dr. TRIPE said that the vestries should only be taxed according to the number of beds occupied by each district board.

Mr. MURPHY thinks it an objection that the whole arrangements will be subject to Poor-law control.

Mr. Charles Kelly, Professor of Hygiene, King's College, London, Medical Officer of Health for the West Sussex Combined Sanitary District; and Dr. C. E. Saunders, Medical Officer of Health for the Middlesex and Herts Combined Sanitary District, were elected as Extra-Metropolitan Members.

Dr. John Sykes was proposed as a Member, and Dr. Mackie, of Brighton, as an Associate.

A vote for a letter of condolence to be sent to the relatives of the late Mr. Harry Leach was proposed and carried.

Dr. J. W. TRIPE then read a short paper on

DISINFECTANTS IN CONTRADISTINCTION TO DEODORANTS AND ANTI-PUTREFACTIVE AGENTS.

Recent investigations and experiments have, he said, somewhat unsettled the generally received opinions as to the action of one or two of the most popular disinfectants. The ordinary dictionary meaning, that a disinfectant is a thing which destroys the cause of infection, expresses precisely what a disinfectant should be capable of doing: anything which comes short of this is not worthy of the name. Of the various compounds in general use as disinfectants, very few indeed come within the definition just mentioned—viz., as destructive agents, By far the largest number are preservatives (anti-putrefactives) or deodorants, the oxidising compounds being included in the last-named class. Anti-putrefactives and deodorants act by affecting those organic substances given off by the patient or evolved from some extraneous source which might otherwise assist in the development of "germs" which are said to originate the specific actions manifested during the progress of the infectious disorders, and to which it is now customary to apply the term "zymotic diseases." The infective matter of a zymotic disease is a particulate substance which is probably too small for definition under the microscope. The cheapest and best disinfectants are heat, sulphurous and hydrochloric acids, and chlorine, to which we may add concentrated aromatic vinegar. The temperature to be employed in disinfecting clothes, etc., should be between 230° and 250° Fahr. In fumigating an ordinary-sized room, from half a pound to a pound and a half of sulphur is ordinarily employed, care being taken not to burn too much, otherwise some of the stinking sulphur compounds will be formed, and cause a most unpleasant smell to be given off from beds or mattresses for some weeks afterwards. Experiments carried out by Messrs. Vacher and Braidwood seemed to show without doubt that carbolic acid would destroy the infective power of vaccine lymph; but others subsequently performed by Dr. John Dougall, of Glasgow, have thrown much doubt on the matter; for although, when the acid and lymph were kept in sealed tubes, vaccination proved ineffectual, yet when the mixture was exposed to the air the carbolic acid evaporated, and the lymph became infective. The quantity of acid used in Messrs. Vacher and Braidwood's experiments was far larger than anyone would employ for ordinary disinfection, and this makes their experiments somewhat objectionable for practical purposes. The strength of Calvert's No. 5 acid usually recommended—viz., one of acid to fifty of water—would seem to be useless except for preservative purposes. A disinfectant is often tested by its ability to prevent putrefaction or by the presence of bacteria in albuminous solutions. There is but little evidence to show that the infective matter of a zymotic poison resembles bacteria, or that it is capable of undergoing putrefaction. Chloralum, sulphates of iron, copper, zinc, and other similar substances, appear to be simply anti-putrefactive agents, which may be usefully employed by coagulating the albumen of the fluid in which the infective particles are suspended, and thus prevent infection until they are carried away. Thymol, which is an active anti-putrefactive agent, must act in some other way, and has not been used as a disinfectant. The other class of so-called disinfectants consists of substances having the power of removing offensive smells, and for the most part giving off peroxide of hydrogen, or other forms of oxygen in an unstable condition, such as ozone. The quantity of oxygen which is given off by these substances is so small that their use for the disinfection of urine and alvine evacuations seems almost absurd. That they will oxidise organic matter in a putrescent condition is incontestable, but that is no proof that they will destroy infective matter. Indeed, we have no evidence to show that a zymotic poison is ever destroyed by simple oxidation. They are capable of changing putrescent matter in the air of a sick-room, rendering a person perhaps less susceptible to a zymotic poison. The use of these by a spray-producer in a sick-room is likely to be beneficial, although not as a true disinfectant. The use of carbolic acid by sprinkling floors and sheets in an infected house is objectionable, because it chiefly substitutes one smell for another, and is not so useful for this purpose as the class of oxidising agents just mentioned.

In the debate following the reading of this paper,

Dr. STEVENSON remarked upon the frequent failure of disinfectants to effect the purpose for which they are used, viz., to destroy the products of infection. They may serve as warnings or danger signals, and thus keep away friends and others from approaching the sick-bed. We are still in the dark as to the real efficiency of different kinds of disinfectants to check the spread of communicable diseases. He considers sulphurous acid and chlorine as being the best aërial disinfectants. He communicated to the Society the results of some interesting analyses which he had recently made of some of the most popular compound disinfectants. *Sanitas* he found to be turpentine through which oxygen had been forced with a view of forming peroxide of hydrogen; but this proved to be almost a fallacy, there being but ·04 per cent. of the peroxide, and in proof of its inefficiency he had succeeded in growing fungi in this fluid. True disinfectants should be capable of destroying torulaceous growths, as in yeast. *Euchlorine* is made by mixing chloride of lime and permanganate of potash, which evolves chlorine. Permanganate of potash yields chlorine when mixed with the solution of chlorine, and at a small cost relatively with other disinfectants. It is a good old rule of Pettenkofer's that to prevent the decomposition of excreta they should be

kept acid with a little green vitriol or carbolic acid. So that all disinfectants, so-called, that have an alkaline reaction tend to promote the growth of bacteria, etc. *Terebene* is a solution of turpentine acted upon by vitriol. He did not think it would be of much use as a disinfectant. Thymol and boracic acid do not coagulate albumen; they have therefore been used with advantage for the preservation of milk. Oxidising agents are not disinfectants; they act upon the organic matter in the air. Sanitas used in powder is a strong and useful disinfectant, but fumes of sulphur are the best.

To avoid repetition we have put in a tabulated form some of the results of Dr. Stevenson's observations:—

Relative Values of certain Proprietary Disinfectants (Dr. Stevenson).

	Market price.	Qualitative analysis.	Cost per lb. of evolving active ingredient with acids, etc.	Action.	Remarks.
Condy's—					
Red fluid ...	1s. bottle	64 to 80 grs.	90s.	Deodorant	
Green „ ...	1s. „	66 to 122 „	60s.	Caustic	Therefore "red fluid" preferable.
Euchlorine ...	...	...	50s.	...	No advantage over permanganate.
Sporokton ...	...	Contains 35 times its volume of gas (not 80, as advertised)	...	Gaseous	Burnett's fluid, with spirit and sulphurous acid added.
Sanitas	...	A trace of peroxide of hydrogen	...	„	Fungi thrive in it.
Chlorinated lime (B.P.)	2d. per lb.	Yields 30 per cent. chlorine	8d.	„	
Chlorinated soda (B.P.)	3d. „	Yields 3 per cent. chlorine	10s.	„	
Labarigue's chlorine combination	15s. per gallon	Yields $\frac{3}{4}$ per cent. chlorine	£70	„	
Permang. of potash	2s. 6d. per lb.	...	3s.	...	Should be treated with hydrochloric acid, or perchloride of iron and alum.

Dr. Heron remarked that Professor Lister has recently experienced some surprise on finding bacteria in the discharges from wounds which have been most carefully treated with antiseptic dressings. Differing from Dr. Stevenson, he considered that the general way in which disinfectants are sprinkled about makes people careless about mixing together, under the impression that they are protected from danger.

Dr. Dudfield hoped that Dr. Stevenson would not be deterred from carrying out further experiments in the interests of the Society, with a view to come to some decided and collective action in the use of protective agents. He hoped that such experiments would be undertaken at the expense of the Society.

Dr. Bristowe alluded to Dr. Baxter's experiments upon vaccine lymph. He hoped that the Local Government Board would be encouraged to undertake further experiments. He thought it was proved that septic bacteria are capable of developing a poison which may be transmissible. If bacteria will live in a disinfectant solution it could not properly be called disinfectant. The best disinfectant is heat. About 150° C. will destroy the products of contagion. Dr. Bastian had subjected tubes of hay solution to a heat of 400°, and yet germs appeared shortly after; so that high temperatures will not always destroy the vitality of germs.

Dr. Tripe, in his reply, said that bacteria and zymotic poisons are clearly not related. Dr. Sanderson has forced at high pressure dry air through pieces of unglazed porcelain without removing germs capable of reproduction. This proves that the spores must be exceedingly small and certainly not bacteria. They are probably incapable of being differentiated by the highest powers of the microscope.

Glanders in the Human Subject.

Dr. Dudfield made some remarks upon two such cases as being a probable cause of the spread of glanders among horses in the metropolis. He thought this disease existed sometimes in the human subject without being recognised as such, the connexion not being carefully traced out as due to inoculation or communication from a glandered horse in an adjoining stable or elsewhere. One of the cases was that of a child with ulcerated throat and other symptoms; it died in twenty days. The second case was that of a young man whose forehead had been slightly bruised, and a gangrenous ulcer developed at this spot; pustules and gangrenous ulcers appeared on other parts of the body. The provisions of the law for slaughtering all animals affected with glanders are not properly carried out. Many of the night cabmen drive glandered horses. When the disease is very extensive and the horse adjudged incurable, it is taken to the knackers and killed without any precautionary measures to avoid the spread of contagion. The body is carried through the streets, and the flesh sold for cats' meat. The Kensington Vestry, with a view to prevent the spread of this disease, have forbidden the dustmen to water their horses at the public troughs. He considered that we ought to have periodical inspection of all stables where cab and omnibus horses, etc., are kept.

Dr. Bristowe said that he had always looked upon glanders as similar to hydrophobia, *i.e.*, communicable by inoculation, but not capable of being conveyed through the air. He considered it a disease very rarely found in the human subject; but it may be on the increase.

Danger of Internal Drainage of Houses.

Dr. Frederick Churchill exhibited a section of an air-shaft to a leaden soil pipe which had been accidentally wounded by a chisel, causing a draught of sewer-air into the bedroom through which the pipe passed. The damage was not discovered for some weeks after. Considerable difficulty had been experienced in finding the cause of the bad smell in the house. Dr. Churchill desired to show—first, the undesirability of carrying soil-pipes through the interior of a house; and secondly, the difficulty often experienced of finding the spot where the leakage occurs. At the present time builders and architects seem to prefer the construction of soil-pipes of rolled lead carried in a casing with the other pipes inside the house. The wound of this pipe was caused by a workman driving a chisel from the outside through an eighteen-inch brick wall, for the purpose of carrying a cistern overflow on to a lead flat. The consequence of this was that the shaft was wounded on the side touching the brick wall, and close to a lath-and-plaster partition at the part most hidden from view. The shaft passed up the casing in the angle of the two walls of the bedroom. It so happened that the wound was a large one, so that by pouring water from the roof down the open mouth of the shaft it leaked through the opening. Without such a test it would have been difficult, and perhaps impossible, to detect the wound. Had it been merely the prick of a pin or a nail it would have been overlooked, and the entrance of sewer-gas into the house have remained unchecked. It should be added that the house was a large one, and built by a first-class builder, the fittings being good and well arranged.

Mr. Browning then made some remarks upon the Canal Boats Act, and the difficulty of enforcing the provisions in respect of quarantine arrangements.

The Doctors in Memphis during the Epidemic of Yellow Fever.—In 1878 all the homœopaths, 4 in number, ran away when the plague came. Of the 46 regulars, 10 followed in their wake; of the 36 who remained, 28 were attacked with the fever, and 14 died; 8 already had had the disease, and were not attacked, although on duty day and night. This fact corroborates the belief that one attack gives immunity from a second.—*New York Med. Record*, October 25.

Frozen Medicines.—It is asserted by Dr. Edwyn Andrew that many drugs can be given with superior advantage by first freezing them. Antiseptic, astringent, antiemetic, and nauseous medicines come under this head, and can be combined with ice without difficulty. An especially good feature of this plan is in its affording a possibility of the stomach's retaining medicines which it would reject when given in ordinary ways.—*New York Med. Record*, November 15.

OBITUARY.

HENRY HANCOCK, F.R.C.S. Eng.

The profession at large will greatly regret to learn that Mr. Hancock, the well-known surgeon, died at his country residence, Standen House, Chute, Wiltshire, on New Year's Day, in the seventy-first year of his age. For many years he occupied a prominent position, and was highly esteemed by the profession and the public, no less for the independence of his character, and his uprightness in all the relations of life, than for his skill as an operating surgeon, and sagacity and reliable judgment in his profession.

After a sound general education, Mr. Hancock commenced his professional studies at the old Westminster Hospital, in the days when its surgical celebrities were Lynn (old), Anthony Carlisle, Anthony White, and Guthrie. Here he was under the special guidance of Mr. Guthrie, who continued his firm friend so long as he (Guthrie) lived.

In due course Mr. Hancock became House-Surgeon to the Hospital, and even at this early period of his professional career gave indications of that mechanical skill in the treatment of severe surgical cases which was so conspicuous in his great operations in after life.

He became a Member of the Royal College of Surgeons in 1834, and in the following year was appointed Demonstrator of Anatomy at the Westminster Hospital School, where Todd lectured on Physiology, and Guthrie on Surgery. This office he resigned in 1838, on being elected Lecturer on Anatomy and Physiology at Charing-cross Hospital. In 1839 he was made Assistant-Surgeon to the latter Hospital, having, after the most keenly contested election on record, defeated Mr. Palmer, the editor of Hunter's surgical works, and afterwards speaker of the House of Assembly at Melbourne. This gentleman was supported and canvassed for by the late distinguished surgeon, Sir Benjamin Brodie, to an extent which at the present time would be considered unjustifiable, seeing that Mr. Hancock was supported by the Council of the Hospital and the whole of its medical staff.

On the resignation of Mr. Partridge, he was elected Surgeon to Charing-cross Hospital, and succeeded to the Lecturership on Surgery on the death of Mr. Howship—posts which he filled with brilliant success, and advantage to the medical school, holding the former until his retirement from the more active public duties of his profession.

Mr. Hancock's hospital career was marked by a great improvement in the treatment of diseases of the joints, and he was looked upon as the honourable rival of Fergusson in conservative surgery generally. He contributed several articles to the "Cyclopædia of Anatomy and Physiology," and to the medical journals; was the first to remove the os calcis and retain the foot; and wrote excellent practical essays on the operation for strangulated hernia, in which he advocated opening the sac, and on stricture of the urethra. He published an account of the arrangement of the muscular structure of the urethra; and also a paper on the division of the ciliary muscle for glaucoma in preference to iridectomy. For many years Mr. Hancock was Surgeon to the Royal Westminster Ophthalmic Hospital, and had a large private eye practice.

He translated from the French Velpeau's "Surgical Anatomy." He was elected an Honorary Fellow of the College of Surgeons in 1843 and in 1863 a member of the Council, and always took the greatest interest in all the affairs of the College. In 1865 he was unanimously elected the "Arris and Gale" Professor of Human Anatomy and Surgery, and chose for the subject of his lectures the Anatomy and Surgery of the Human Foot and Ankle-Joint. These lectures were published in the medical journals of the day, and afterwards in a complete form. The work is considered the standard book on the subject.

In 1870 Mr. Hancock was elected a member of the Court of Examiners of the Royal College of Surgeons, and discharged the duties of that important office in the most exemplary manner. In 1872 the highest dignity in his branch of the profession was conferred on him by his colleagues, when they elected him President of the College; and in 1873 he delivered the Hunterian Oration. He had filled the offices of President of the Westminster Medical Society (founded by John Hunter), and President and Lettsomian Professor of Surgery to the Medical Society of London, and was a fellow of several learned societies.

In the Royal Medical Benevolent College he took a warm interest, and for some time before a paid secretary was appointed he acted as honorary secretary, and subsequently as treasurer, until he retired from practice and left London.

On Mr. Hancock's retirement from hospital and general professional work, a few years ago, he was elected Consulting Surgeon to the Charing-cross Hospital, and his colleagues and old pupils, as a mark of their regard and esteem, requested him to sit to Mr. Richmond, R.A., for his portrait, which they presented to him.

NEW INVENTIONS AND IMPROVEMENTS.

GALE AND CO.'S PEARL-COATED PILLS.

Coated pills are certainly not a new invention, but we have received lately from Messrs. Gale and Co., 15, Bouverie-street, some samples of their Pearl-coated Pills, which deserve a few words of warm commendation. The pills are well prepared; the coating is elegant in appearance, does not easily crack or split off, is quite tasteless, and is readily soluble. They will be found very convenient preparations, and the reputation of the house is a sufficient guarantee of their excellence. Messrs. Gale and Co. have also sent us a new edition of their Pill Formulæ, and Notes on New Remedies. The catalogue is neat, and well compiled, and contains all the pills of the British Pharmacopœia; with a careful selection from the Pharmacopœias of the London Hospitals, supplemented by many other formulæ. It has, moreover, a very useful Index to the Pill List, which shows the quantities and proportions of the ingredients in the different combinations.

PURE DUTCH COCOA.

This is an excellent preparation, manufactured by William Tulloch and Son, Bury-street, London. It has a pure, fine flavour; and by mixing from one to two or three small teaspoonfuls of it with a little boiling water, stirring well, and then filling up with boiling water, and adding sugar and milk or cream to suit the palate, a breakfast-cupful of excellent cocoa or chocolate may be very quickly and easily provided.

MEDICAL NEWS.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to all new Appointments that take place.

Burnet, R. W., M.D., M.R.C.P.—Physician to Out-patients at the Great Northern Hospital.

Ormerod, J. A., M.A., M.B., M.R.C.P.—Physician to Out-patients at the Great Northern Hospital.

NAVAL AND MILITARY, Etc., APPOINTMENTS.

Admiralty.—The undermentioned Surgeons have been promoted to the rank of Staff-Surgeon in Her Majesty's Fleet, with the seniorities stated against their names:—Michael Upington Greamy, M.D., William Henry Putsey, George Bell Murray, St. Lawrence Ffrench Mullen, M.D., and Richard Alfred Mowll, M.D., with seniority of 24th inst.; James Robertson, John Kelly Conway, M.D., Henry Clerke, William Galloway, M.D., and Alfred Gideon Delmege, M.D., with seniority of 25th inst.; Robert Turner, Thomas Lyle Horner, and Septimus Sexton, with seniority of 26th inst.; Septimus Evans, with seniority of 27th inst.; and William Percival Magor Boyle, with seniority of 28th inst.

BIRTHS.

Ashton.—On January 4, at the Curragh Camp, the wife of Surgeon-Major Ashton, A.M.D., prematurely of a daughter, stillborn.

Harley.—On January 2, at 39, Brook-street, Grosvenor-square, the wife of John Harley, M.D., of a son.

Nicholls.—On December 3, 1879, at Dominica, West Indies, the wife of H. A. Alford Nicholls, M.D., of a daughter.

MARRIAGES.

Buchanan—Brown.—On January 6, at Rochester, Walter Buchanan, M.R.C.S., of Chatham, to Kate Cowan, widow of the late Thos. W. S. Brown, Assistant Paymaster R.N., eldest daughter of J. J. D. Barns, M.D., J.P., of Rochester.

Davidson—Rayner.—On December 30, 1879, at St. Matthew and St. James, Mossley Hill, Alexander Davidson, M.D., of Gambier-terrace, Liverpool, to Ellen Alison, eldest daughter of the late Lloyd Rayner, Esq., Mossley House, Liverpool.

HURFORD—HAYLOCK.—On January 5, at Paddington, Cedric Herbert Hurford, B.A., M.D., to Ethel Mary Haylock, youngest daughter of the late John Haylock, Esq., of Balsham Place, Cambridgeshire.

MAY—GUNDRY.—On December 30, 1879, at Honiton, Albert E. May, L.R.C.P., to Mary Augusta, only daughter of the Rev. J. S. Gundry, of Honiton.

STEVENSON—MCCHEANE.—On January 3, at St. Martin-in-the-Fields, Leader Henry Stevenson, M.D., to Theodora Kathleen, youngest daughter of the late John McCheane, of Southsea, Hants.

WALDRON—THEOBALD.—On January 1, at Lee, Alfred Waldron, Esq., to Emma Roberta, eldest daughter of Robert Masters Theobald, M.A., M.R.C.S., of Lea-terrace, Blackheath.

DEATHS.

FREUND, JONAS CHARLES HERMANN, M.D., at 7, West-street, Finsbury-circus, on December 29, 1879, aged 71.

HANCOCK, HENRY, F.R.C.S., at Standen House, Chute, Wilts, on January 1, in his 71st year.

RANKIN, CAMPBELL, M.R.C.S., Retired List Bengal Army, at Holles-street, Cavendish-square, on January 2, aged 79.

SADLER, JOSEPH B., M.R.C.S., at Winterton, near Brigg, on December 28, 1879, aged 70.

WOOLLETT, JOHN MOORE, M.R.C.S., at Monmouth, on December 18, 1879, aged 66.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

KENT COUNTY ASYLUM, BARMING HEATH, NEAR MAIDSTONE.—Senior and Junior Assistant Medical Officer. Candidates must be doubly qualified and registered under the Medical Act. Applications, with testimonials, to be sent to F. Pritchard Davies, M.D., Superintendent, on or before January 20.

LIVERPOOL DISPENSARIES.—Assistant Resident House-Surgeon. Candidates must be unmarried and duly qualified. Applications, with testimonials and registration certificates, to be sent to the Secretary, Leith Offices, 34, Moorfields, Liverpool, on or before January 29.

SUNDERLAND AND BISHOPWEARMOUTH INFIRMARY.—Physician. Candidates must possess the degree of Doctor in Medicine of some University of the United Kingdom, and be registered accordingly, and are not to undertake to practise in surgery or midwifery. Applications, with testimonials, to be sent to the Secretary, John Kitts, Esq., on or before January 28.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Kidderminster Union.—The Wolverley District is vacant by the death of Mr. John Hillman: area 6378; population 3199; salary £70 per annum.

Penzance Union.—Mr. F. E. Hunt has resigned the Third District: area 12,656; population 10,799; salary £26 per annum.

Shipston-on-Stour Union.—Mr. David John Sherrard has resigned the Halford District: area 12,199; population 2751; salary £47 per annum.

Tavistock Union.—The Tavistock District is vacant: area 13,986; population 7781; salary £55 per annum. Also the Workhouse: salary £35 per annum.

APPOINTMENTS.

Altrincham Union.—James Deakin, M.R.C.S. Eng., L.S.A., to the Ashton-upon-Mersey District.

Basingstoke Union.—Charles H. Johnson, M.R.C.S. Eng., L.S.A., to the Workhouse.

Brighton Parish.—Thos. Leigh, M.R.C.S. Eng., L.R.C.P. Lond., to the Central District.

Easingwold Union.—James F. Witz, L.R.C.P. Edin., L.R.C.S. Edin., to the Coxwold District.

Hackney Union.—George A. Batchelor, M.R.C.S. Eng., M.B., C.M. Aber., to the Fifth District.

Isle of Wight Union.—Alfred Hollis, M.D., M.C. Edin., M.R.C.S. Eng., L.S.A., to the Yarmouth District.

Melton Mowbray Union.—Charles H. Penny, L.K.Q.C.P. Ire. and L.R.C.S. Ire., to the Wymondham District.

Mere Union.—James Chilcot, M.R.C.S. Edin. and L.A.H. Dub., to the First District and the Workhouse.

Prestwich Union.—Charles G. L. Skinner, M.D., C.M. Aber., to the Crumpsall District.

Radford Union.—Enoch Snell, M.R.C.S. Eng., L.S.A., to the First District.

Stalybridge.—Mr. Joseph C. Bell as Analyst for the Borough.

Wellingborough Union.—James W. Orr, M.R.C.S. Eng., L.R.C.P., L.S.A., to the Wollaston District.

RADICAL CURE OF INGUINAL HERNIA BY INJECTION.—In a paper inserted in the *New York Med. Record* of October 18, Dr. Joseph Warren, of Boston, gives an interesting account of the modifications and improvements he has made in the treatment of inguinal hernia by injection of fluid extract of *quercus alba* so as to secure closure of the ring. This operation, performed with so much success, but kept secret by the late Dr. Heaton, was only disclosed shortly before his death at the solicitation of Dr. Warren. It is difficult of execution, Dr. Warren observes, but most satisfactory in its results if the numerous precautions which he insists upon in this paper (especially the employment of well-devised instruments and the waiting a sufficient time for the desired result) are observed.

THE HEALTH OF HASTINGS.—The quarterly report of the Medical Officer of Health for the town of Hastings for the period ending September 30 last exhibits a very satisfactory state of affairs as existing in that favourite seaside resort. The number of births registered during the period was 265, giving a rate of 28·15 per 1000. The deaths numbered 129, viz., 66 males and 63 females, 24 of this number being visitors. This gives a death-rate of 12·97 per 1000 only, and exhibits a marked improvement in the rate of mortality, as in the corresponding quarter of the five previous years the rate was 14·23 in 1878, 16·23 in 1877, 13·26 in 1876, 18·0 in 1875, and 17·0 in 1874. The deaths during the quarter from the seven principal zymotic diseases were ten, viz., one each from scarlet and enteric fever, two from whooping-cough, one from diphtheria, and five from diarrhœa. Diseases of the lungs and respiratory organs (not including phthisis) were responsible for thirteen deaths, and the number of violent deaths was six, of which five were caused by accident or negligence. Mr. C. Ashenden, who signs the report, continues to carry out the duties of Medical Officer of Health to the Hastings Urban Sanitary Authority.

PROTECTION OF INSTRUMENTS FROM RUST.—The protection of surgical instruments from rust has been the subject of much correspondence and inquiry between the Home and Indian Governments respectively. Rangoon oil, which was strongly advised in India, has proved a failure. Tincture of benzoin, which is so commonly used in hospitals and dispensaries, is not even alluded to—probably from expense and instability. Boiled Lucca and linseed oils, with the addition of acetate of lead or lead filings, are more or less successful, but have no distinct advantage. It is rather disconcerting to learn that, after all the inquiry and science, strained mutton fat is most to be trusted. It would have been satisfactory to learn that science could protect the metal from future oxidation during manufacture. What has become of that discovery, now nearly three years old, by which steel was to be protected from any possible rust by having its surface not coated, but chemically altered by exposure to super-heated (1200°) steam? For the present all cutting instruments are to have a coating of mutton fat, and blunt ones are to be nickel-plated. Cases are no longer to have velvet linings.—*Indian Med. Gaz.*, November.

OBSTINATE CONSTIPATION IN TYPHOID FEVER.—In a clinical lecture at the Pennsylvania Hospital, Prof. Da Costa observes—"Although diarrhœa has been looked upon as a most certain and constant symptom, it has not escaped the observation of clinical observers that a certain proportion of cases of typhoid are marked by constipation. This observation was made in this country by Nathan Smith in describing the fevers of New England. So too in England, if I remember aright, Murchison says that one-fifth of the cases which have come under his consideration have had constipation. This is a larger proportion than my experience has taught me. We very often find these cases going in groups. A certain epidemic is marked by this symptom as a peculiar feature. Is this symptom of any prognostic value? Yes, it is of considerable value, for it has been found that the cases with constipation generally recover, and are the lightest. Our general conclusion is that cases with constipation as a constant symptom are generally favourable; and that the inflammatory and ulcerative action is slight, except in those rare instances where one gland sloughs, giving rise to perforation, hæmorrhage, and death. The treatment depends upon whether the constipation follows diarrhœa, or whether it has been a constant symptom from the beginning. If it is simply a reaction from the diarrhœa, I let it alone, unless it continues a very long time. There is an old saying by Baglin, that in typhoid fever we should 'shun purgatives like the plague.' I do not agree with him; and yet his dictum represents a truth—that we should not interfere in such cases unless it is absolutely necessary—unless they last from four to six days. When constipation is the rule, however, from the beginning of the attack, I always interfere, otherwise hard masses accumulate, and press on and irritate the bowel. In such cases it is better practice to resort to laxatives, and of these none is so good as castor oil in small doses. We half fill a spoon with iced water, and then float one to two fluid drachms of the oil on the top. When there is a tendency to excessive constipation there should not be an exclusive milk diet, but the food should be varied by the use of animal broths, etc."—*Louisville Med. News*, December 13.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

London Street Accidents.—The return for the week ending the 3rd inst. of the Society for Preventing Street Accidents shows—killed, 4; run over, 35.

Dens Sap., Leicester-square.—It is very doubtful whether there will be an examination for the L.D.S. in February, as was expected, owing to the paucity of names entered.

P. P., Chelsea.—Yes, the Bill to remove disqualification by medical relief for infectious or contagious disease was brought into Parliament by Sir Charles W. Dilke and Mr. Rathbone, Sir John Kennaway and Mr. Ritchie.

L.S.A., Bucks.—Frequent prosecutions for refusing to have children vaccinated may appear harsh, but Poor-law guardians in the course which they pursue are exercising a discretion with which the law intrusts them.

Dr. Williams.—The suburban residence of Mr. Spencer Wells is situated at Golder's-hill, on the western border of Hampstead Heath. A very pretty view of it by Vernon Heath, with a description by Mr. W. Robinson, the editor, appeared in *The Garden* of December last.

A Metropolitan Teacher.—It is a mistake on the part of one of our contemporaries to state that "considerably more candidates offered themselves at the primary examination this January than at the last." In 1879 there were 148, at the present 140—showing just the reverse.

Retrenchment.—The Atbridge Rural Sanitary Authority have resolved to reduce the salaries of their medical officers of health from £100 to £50 each, and the salary of the inspector of nuisances from £191 to £150, and, sitting as the Board of Guardians, the salaries of all Poor-law officers have been correspondingly reduced.

Anti-Bicyclist: a Victim.—Lord Templetown's motion in the House of Lords last session was for a return of the accidents which had occurred in the streets of the metropolis referable to the passage of vehicles, bicycles, or horsemen from January 1, 1878, to January 31, 1879, showing the circumstances under which each accident had occurred, its issues, and results.

Longevity.—Our contemporary the *Times* has lately contained in its obituary some remarkable illustrations of prolonged existence—notably so on the 6th inst., when the deaths of five ladies and three gentlemen were recorded, whose united ages amounted to 674 years, giving an average of eighty-four years and three months to each. The eldest, as usual, was a lady who had reached the great age of ninety-three; the youngest of the same sex was eighty-one; of the gentlemen the oldest was eigthy-seven; and the youngest eighty years of age. There were also fifteen septuagenarians, averaging seventy-five years each.

"The Hot-Water Bottle": a Fatality.—At Birmingham, a few days since, an inquest was held on the body of a lady who was accustomed to warm her bed by means of a half-gallon stone bottle, which, being filled with water, was heated in the oven. On the 7th ult. the bottle, which was tightly corked, was left in the oven, and in the evening the deceased was lifting it out to carry it upstairs when it suddenly exploded, and she was severely injured about the head, receiving, besides other wounds, a compound depressed fracture of the skull and a fracture of the upper jaw. On the 26th she died from exhaustion produced by the injuries she had sustained.

Habitual Drunkards: the New Act.—The Habitual Drunkards Act, to facilitate the control and cure of habitual drunkards, came into operation on the 1st inst., and will be in force until the expiration of ten years from the date of its passing on July 3, 1879. An "habitual drunkard" is defined as a person who, not being amenable to any jurisdiction in lunacy, is notwithstanding, by reason of habitual intemperate drinking of intoxicating liquors, at times dangerous to himself or herself, or his or her affairs. A "retreat" is stated in the Act to mean "a house, licensed by the licensing authorities named by this Act, for the reception, control, care, and curative treatment of habitual drunkards." No licence shall be given to any person who is licensed to keep a house for the reception of lunatics. The justices are to have the power to send habitual drunkards to retreats, and persons may be admitted to retreats on their own application.

The Devices of Milk-sellers.—The devices of milk-sellers to avert punishment for adulterating milk are both ingenious and amusing. At Hammersmith recently a sample was supplied to the inspector, and a goose was immediately afterwards sent to his house with "the compliments of the season," but the law took its course. At Wandsworth, a milk-seller, when applied to for a sample, said he could not spare any, as he had no more than enough to supply his customers. The milk, however, was got from one of the customers, and it contained 32 per cent. of water. A Derby milk-dealer has been prosecuted by the visitors of the Leicester Lunatic Asylum for supplying milk which on analysis was found to have had one-third of the cream abstracted and 5 per cent. of water added; the defence being that the dealers were merely the agents for others, and did not know the milk was bad. In each of these cases the magistrates imposed fines.

Mr. John Whitaker Hulke, F.R.S.—At a special meeting of the Council of the Royal College of Surgeons, on Wednesday, the 7th inst., the above gentleman was elected a member of the Court of Examiners, in the vacancy occasioned by the resignation of Mr. Curling, F.R.S. The Middlesex Hospital, to which Mr. Hulke is Surgeon, is now represented both in the Court and Board of Examiners, at the latter of which Mr. Lowne took his seat on Wednesday last.

Ovariotomy.—This operation was first performed in 1809, by Ephraim McDowell, a country practitioner in Domville, Kentucky. McDowell was of Scotch origin, and received his professional education in Edinburgh. In 1793 and 1794 he was a pupil of John Bell. McDowell's first operation was successful, and the subject of it, a Kentucky lady, survived it thirty-two years. He had performed the operation three times, when he first published, in 1817, a badly written account of it. The truth of the statements he then made was on all hands doubted. He performed the operation thirteen times in all, with the result of eight cures, four deaths, and one failure to complete the operation. Lizars, of Edinburgh, in 1825, first performed ovariotomy in Great Britain. The operation was not performed in London till 1842; in France it was performed for the first time in 1847. It was not till after 1858 that ovariotomy began to be accepted as one of the legitimate operations in surgery.

Self-immolation "for Anatomical Purposes."—"Considerable amusement," it is stated, was caused at a recent meeting of the Board of Guardians of the Wandsworth and Clapham Union by the reading of a letter from a carpenter, stating, *inter alia*, that he had endured seven long years of mental and bodily suffering which no medicine could cure; and he concluded by stating—"I see the utter hopelessness of my case; nothing but galling shame, poverty, and disappointment before me. I have resolved to get myself put out of the road; therefore I propose to offer myself to doctors for anatomical purposes. First destroy me with chloroform and opium. The case may prove remunerative to science; but I exact in return that my eldest daughter shall be provided for. The doctors will perhaps be able to discover the cause of my remarkable dreams." The mirth which this letter apparently produced amongst the guardians was the only effect it had upon them, but no action was taken in the matter.

Red-tapeism at Hounslow.—The attention of those responsible for the hospital arrangements at Hounslow Barracks is properly called by the coroner's jury to a regulation which should be relaxed in an exigency similar to that to which the following case refers:—At an inquest held at the barracks last week, a man, late a bandsman of the 7th Fusiliers, who had been visiting on Christmas-day a militia sergeant at the barracks, was found lying at the bottom of some stone stairs down which he had probably fallen, being intoxicated at the time. The sergeant, on hearing what had occurred to his friend, went to the spot, and finding him insensible, sent for the hospital attendant, who refused to admit the unfortunate man to the hospital, "as he had left the Army and was considered a civilian." Thereupon he was taken to the guard-room, where he died, and no doctor attended until four hours after his death. The jury returned a verdict of "Accidental death," adding "their regret to find that there was such a difficulty in obtaining medical assistance."

Mysterious Deaths.—An adjourned inquest was held at Malton, last week, by Dr. Wood, the North Riding Coroner, on the bodies of two young men, sons of farmers, residing near Rosedale, both of whom were found dead in one bed on the morning of the 10th ult., after having retired to rest the previous night in good health and spirits. The deceased had been with an uncle the day before their deaths, and went home at night, and went to bed in a room which had been recently rebuilt. The inquest was adjourned for the production of the analysis of the stomachs of the deceased, the report of which from the analyst was now read. It stated that not the slightest trace of poison anywhere could be discovered. The analysis tended to support the opinion of suffocation by some gas or atmospheric poisoning, but the evidence of Dr. Walker, who made the post-mortem examination, was to the effect that the internal appearances were quite healthy, there being no sign whatever of death from asphyxia or anything to account for death. Under instructions from the coroner, the police superintendent was required to take possession of the bedroom and the room underneath, put them in the same condition as on the night when the young men met their death, and when they have been fastened up a few days, to allow Dr. Walker to test the atmosphere, in search of any noxious gas likely to cause death. The inquiry was adjourned for this purpose.

COMMUNICATIONS have been received from—

The Sanitary Commissioner, Punjaub, India; Dr. Edward I. Sparks, Mentone; The Hon. Secretary of the West Kent Medico-Chirurgical Society; Mr. R. Clement Lucas, London; Mr. William Fraser, Aberdeen; The Editor of "Iron"; Dr. Norman Chevers, London; Dr. James M'Craith, Smyrna; Dr. M. Charteris, Glasgow; Major McCoy, London; Mr. R. J. Godlee, London; Dr. J. Williams, London; Dr. J. W. Moore, Dublin; Dr. J. Mitchell Bruce, London; The Secretary of the Royal Institution; Mr. S. J. Hutchinson, London; Mr. J. Cantlie, London; Dr. R. W. Burnet, London; The Secretary of the Devonshire Hospital; The Registrar-General, Edinburgh; Professor Spence, Edinburgh; Mr. Francis Hind, London; Dr. Hermann Weber, London; The Lord Mayor, London; Dr. Lush, Fyfield, Andover; The Hon. Secretary of the Medico-Chirurgical Society of London; The Secretary of the Poor-Law Medical Officers' Association; Dr F. De Havilland Hall, London; Mr. J. Chatto, London; Mr. T. M. Stone, London; Dr. Vinen, London.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Centralblatt für die Medicinischen Wissenschaften—Gazette Hebdomadaire—Louisville Medical News—Nature—National Board of Health Bulletin—Revue Médicale—Vaccination Inquirer—Weekly Return of Births, Marriages, and Deaths—El Siglo Medico—Veterinarian—Dublin Journal of Medical Science—Leisure Hour—Sunday at Home—Boy's Own Paper—Medical Temperance Journal—Electro-Metallurgist and Electric Light Journal—Revista de Medicina—Archives Générales de Médecine—Edinburgh Medical Journal—Journal des Sciences Médicales—La Cronica Médica—Philadelphia Medical Times—Centralblatt für Gynäkologie—Indian Medical Gazette—Truth—South London Press—Cape Times—Students' Journal—Analyst—Obstetrical Journal.

BOOKS AND PAMPHLETS RECEIVED—

Statistical Report on the Health of the Navy for the Year 1878—Triennial Report on the Saughton Hall Institution—Lunacy Reform, by E. S. Seguin, M.D.—Proceedings of the Anjuman-i-Panjab—Henry Gould Sharp's Investment Circular—Supplement to the Queensland Government Gazette—The Regional Temperature of the Head, by J. S. Lombard—Youth, its Care and Culture, by J. Mortimer Granville—Broadmoor Criminal Lunatic Asylum Annual Report, 1878.

APPOINTMENTS FOR THE WEEK.

January 10. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

12. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Odontological Society, 8 p.m. Annual General Meeting. Casual communications from Mr. W. H. Skeel, Mr. Percy May, and R. H. Woodhouse.

Medical Society of London, 8½ p.m. Mr. G. C. Coles will exhibit and demonstrate the Laryngo-Phantom. Dr. Hughlings-Jackson, "A Case of Tumour of the Cerebellum." Mr. Thomas Bryant, "On Parallelism of the Lower Extremities in the Treatment of Disease or Injury of the Hip-Joint, with the best means of securing it."

13. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Royal Institution, 3 p.m. Prof. Schäfer, "Physiology of Muscle."

Royal Medical and Chirurgical Society, 8½ p.m. Adjourned discussion on Mr. Morris's and Dr. Thin's papers, "On the Connexion of Eczema of the Nipple with Cancer of the Breast." Mr. Frederic S. Eve, "Two Cases of Direct Dislocation Backwards of the Femur." Mr. Christopher Heath, "On Aneurism of the Subclavian Artery treated by Amputation at the Shoulder-Joint and the introduction of Needles into the Sac."

14. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 1½ p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.

Hunterian Society (London Institution) (Council Meeting, 7.15 p.m.), 8 p.m. Dr. Herman, "On a Class of Cases in which Relief may be given by the use of Vaginal Pessaries." Dr. Braxton Hicks, "On Lateral Obliquity of the Pregnant Uterus." Dr. Galabin, "On a Case of Unusual Pelvic Deformity."

Obstetrical Society, 8 p.m. Specimens: Dr. Godson—Ruptured Fallopian Tube. Dr. Heywood Smith—New Instruments. Dr. Hilliard—One-Headed Twin Monster. Paper: Dr. Champneys, "On the Pain in Pelvic Cancer, and its Relief by Morphia."

15. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

Harveian Society, 8½ p.m. Dr. Goodhart, "On Cases of Anæmia as a Cause of Heart Disease." Dr. Broadbent, "On Venæsection."

Royal Institution, 3 p.m. Mr. H. H. Statham, "Modern Architecture since the Renaissance."

16. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

Royal Institution, 9 p.m. Prof. Dewar, "Investigations at High Temperatures."

Society of Medical Officers of Health, 7½ p.m. Dr. Tatham (Salford), "On certain Reforms which appear desirable in the Statistical Reports of Medical Officers of Health."

VITAL STATISTICS OF LONDON.

Week ending Saturday, January 3, 1880.

BIRTHS.

Births of Boys, 1522; Girls, 1546; Total, 3068.
Average of 10 corresponding years 1869-78, 2061·6.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	1048	1140	2188
Average of the ten years 1869-78	877·0	883·5	1760·5
Average corrected to increased population ...	...	...	1884
Deaths of people aged 80 and upwards ...	...	...	81

Note.—The births and deaths registered last week may be compared with the average numbers in the corresponding weeks of the ten years 1869-78 after raising the average by 7 per cent. for increase of population.

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa
West	561359	1	4	5	...	24	...	...	...	3
North ...	751729	...	4	11	5	27	...	2	1	2
Central ...	334369	...	4	8	2	19	...	2	...	...
East	639111	1	10	22	2	23	...	4	...	4
South	967692	2	17	23	7	67	...	8	3	4
Total	3254260	4	39	69	16	165	...	16	4	13

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·839 in.
Mean temperature	45·7°
Highest point of thermometer	54·1°
Lowest point of thermometer	35·2°
Mean dew-point temperature	41·9°
General direction of wind	W.S.W. & S.W.
Whole amount of rain in the week	0·44 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, Jan. 3, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1879.*	Persons to an Acre. (1879.)	Births Registered during the week ending Jan. 3.	Deaths Registered during the week ending Jan. 3.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In centimetres.
London	3620868	48·0	3068	2188	54·1	35·2	45·7	7·61	0·44	1·12
Brighton	105608	44·9	83	62	49·2	33·7	42·5	5·84	0·64	1·63
Portsmouth ...	131821	29·4	65	53	...	...	...	...	...	...
Norwich	85222	11·4	75	37	56·2	31·0	44·7	7·06	0·33	0·84
Plymouth	74293	53·3	51	50	53·0	39·0	47·5	8·61	0·87	2·21
Bristol	209947	47·2	178	111	55·2	34·4	45·9	7·72	0·88	2·24
Wolverhampton ...	75100	22·1	63	34	53·8	30·5	43·3	6·28	0·42	1·07
Birmingham ...	388884	46·3	337	200	...	...	...	...	...	...
Leicester	125622	39·3	92	57	...	...	...	..	...	...
Nottingham ...	169396	17·0	118	99	55·7	28·9	44·2	6·78	0·68	1·73
Liverpool	538338	103·3	433	316	...	...	...	...	...	...
Manchester ...	361819	84·3	238	192	...	...	...	...	...	...
Salford	177849	34·4	132	109	...	...	...	...	...	...
Oldham	111318	23·9	72	47	...	...	...	...	...	...
Bradford	191046	26·5	134	84	54·3	29·2	43·9	6·61	1·32	4·62
Leeds	311860	14·5	220	167	54·0	35·0	44·1	6·73	0·88	2·24
Sheffield	297138	15·1	205	132	54·5	33·5	44·7	7·06	1·69	4·29
Hull	146347	40·3	118	74	55·0	32·0	42·5	5·84	0·55	1·40
Sunderland ...	114575	41·4	90	43	56·0	32·0	43·2	6·61	0·23	0·58
Newcastle-on-Tyne	146948	27·4	117	65	...	...	...	...	...	...
Edinburgh	226075	53·9	134	105	54·9	32·3	42·0	5·56	1·08	2·74
Glasgow	578156	95·8	373	255	...	...	...	...	...	...
Dublin	314666	31·3	232	262	56·3	33·0	45·8	7·67	0·93	2·36
Total of 23 Towns in United Kingdom	8502896	38·6	6628	4742	56·3	28·9	44·3	6·84	0·82	2·08

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·84 in. The lowest reading was 29·46 in. on Tuesday afternoon, and the highest 30·32 in. at the end of the week.

* The figures for the English and Scottish towns (except for Nottingham, Salford, and Oldham) are the numbers enumerated in April, 1871, raised to the middle of 1879 by the addition of eight years and a quarter's increase, calculated at the rate which prevailed between 1861 and 1871. Revised estimates have been adopted for Nottingham, Salford, and Oldham, based upon special returns of inhabited houses existing within those boroughs. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE
ON VARIOUS CASES UNDER CARE AT THE LONDON HOSPITAL.

By JONATHAN HUTCHINSON, F.R.C.S.,
Senior Surgeon to the London Hospital, and Professor of Surgery and Pathology at the Royal College of Surgeons.

Gentlemen,—Amongst the cases of especial interest at present in our wards is that of a man in Talbot, who has an immense open ulceration on the right side of his neck. He is only forty-four, and knows of no special cause for his ailment. A large glandular swelling formed in his neck, surrounding his sterno-cleido, and making movement of the head difficult. In this condition he came to us about six months ago. The mass had softened in several places, and over these the skin was livid and dusky. A remarkable feature in the case was the manner in which all the tissues were glued together: you could not distinguish any separate glands, and the skin was united most firmly to the whole mass. At its outskirts, especially near the clavicle, the structures were almost as hard as stone, but still without any of that definite limitation which usually denotes cancer. It was a sort of carbuncular hardening, but much more extreme in degree. From the first we entertained the question as to whether the disease might be malignant, but I decided against that hypothesis, partly on account of the absence of any primary growth, partly from the man's age, and partly from the features of difference which I have mentioned. I put the man under ether, and then opened freely with the knife and Pacquelin's cautery the various parts where softening had occurred. I hoped in this way not only to liberate the collections of fluid, but also to excite fresh action in the parts, and put an end to the chronicity of the process. I did it rather freely, pushing the cautery into the mass in various directions. The result for a time seemed good. The man remained in the hospital for two months, and his neck became less fixed, and the swelling rather less. We then sent him to the seaside. At Folkestone he gained in health, and, as he says, the swelling diminished; when, however, he returned to us I did not think him any better. It had been bleeding rather freely, and the open ulcer was much larger. I discovered also another symptom, namely, paralysis of one-half of his tongue. When his tongue was extruded it pointed to the right, and the right half looked flabby and soft. The best method of testing the condition of the lingualis muscle is to take the two sides of the tongue between the finger and thumb of each hand, and then bid your patient thrust his tongue out. If one half is paralysed, you will then easily feel that whilst the sound half becomes firm and stiff the other remains quite soft. In this way a state of paralysis may be detected, which the eye does not reveal. Now, on doing this in the case before us there cannot be the least doubt that the right half is paralysed. I show you two portraits of similar cases: in one the lingualis nerve had been destroyed by sloughing after scarlet fever, and in the other, cut through by a suicidal incision. We infer, then, in the patient before us, that the ninth nerve is involved either in the ulceration or the growth. When I found this out my suspicion that the disease was malignant much increased; for it is very infrequent in the course of strumous gland disease or common inflammation to have nerve-trunks involved, whereas it is very common in cancer. During the last month, also, I fear our suspicions have been strengthened by the aspect which the sore has assumed. There are now some bossy masses at the base of the huge ulcer, which somewhat approach the well-known comparison to cauliflower buds. It has bled repeatedly during the last month, and rather freely. I never recollect to have seen a case of malignant disease beginning in the cervical lymphatics before; and the whole course of the disease has been most unusual.

In another bed, in the same ward, is an elderly man with a glandular mass on the left side of his neck, which is as yet unexplained. It consists of four or five large doughy-feeling glands, which show no tendency to suppurate. Whenever you find lymphatic glands enlarged, suspect some ulceration of skin or mucous surface, or some new growth to which the enlarged glands are secondary. We did so in this case, and examined the mouth carefully, expecting to find a cancerous ulcer at the root of the tongue or in the pharynx; I also obtained the advantage of the laryngoscopic skill of my colleague, Dr. Stephen Mackenzie, but we could discover nothing definite. When enlargement of glands on both sides of the neck occurs simultaneously in elderly persons (beyond the usual age for scrofula), we may suspect disease in the central sinuses of the skull—as, for instance, cancer in the sphenoid. In our present case, however, the enlargement is on one side only.

We admitted, a month ago, a woman with a phagedænic ulcer which involved the entire palm of her left hand, and, with the exception of a very narrow strip of skin, had quite surrounded the base of the thumb. The hand was much swollen and in a horrible condition. When you see phagedæna, suspect syphilis. We had no difficulty here, for the history of syphilis some years ago was easily obtained. I have shown you her hand to-day entirely healed, excepting one spot over the base of the metacarpal bone of the thumb where the bone is exposed. The repair is so complete, and the change in appearance so great, that anyone who had not watched the progress would certainly have difficulty in persuading himself that it was the same hand. The treatment under which this result has been obtained was by continued immersion of the hand in warm water, the application of the acid nitrate of mercury (on a single occasion on admission), and the use internally of the iodide of potassium.

We have admitted to-day an Egyptian with a phagedænic chancre surrounding the glans penis, and in which a precisely similar plan of treatment will be carried out. The sore, which is deep and extensive, will be freely and carefully cauterised in every part with the acid nitrate, and he will be made to sit eighteen hours out of the twenty-four in a warm hip-bath. The object of these measures is to destroy or wash away the cell elements by which the infection spreads. In connexion with this case let me call your attention to the fact that phagedænic chancres often occur in those who have had syphilis before. This man gives a history of constitutional syphilis some years ago, and was exposed to risk again in Paris about six weeks ago. His present sore has existed about a fortnight. I mentioned this fact of the occurrence of phagedæna in chancres in those previously affected by syphilis some weeks ago. We had then before us a man who had been treated by the bath, and cured of a phagedænic chancre in two weeks, and who gave us the history of constitutional syphilis five years before the second chancre. I told you at the time that I had then under treatment in private a young lawyer with a bad phagedænic sore destroying an inch of his urethra, and in whom also exactly a five years' interval had occurred between his first attack of syphilis and the sore I have referred to. He also had his sore quite healthy after a fortnight's immersion treatment, with iodide internally. He had exfoliation of his palate—a tertiary symptom resulting from his old syphilis—at the same time that he was suffering from his newly contracted chancre. He had been told that a man could not have syphilis twice, and was greatly disappointed to find that this dictum was not trustworthy. Never tell your patients that syphilis cannot occur twice, for it is a tolerably common event. I grant that the second attack of syphilis is usually peculiar. It is seldom that a well-characterised indurated sore is developed; and very frequently, as I have just said, the sore sloughs. This phagedæna may prevent the occurrence of constitutional symptoms if it comes on early enough. I have, however, seen very severe constitutional symptoms follow a phagedænic sore in a man who had gone through syphilis some years ago; indeed, several of the very worst cases of syphilitic rupia which I have ever seen occurred under these conditions. When you see syphilis run its most usual course—a well-indurated sore, a symmetrical copious papular or blotchy rash, and symmetrical sores in the tonsils—you may assume that it is a first attack. Second attacks are almost always modified, and are either much worse or much more slight. Let me repeat, however, that they are by no means infrequent.

Chilblains in all their various modifications have been very common during the recent cold weather, and we have an opportunity, in a case upstairs, of watching the

the streets all night in one of the bitter nights during the week before Christmas-day. Rather, I suspect that she did not walk, but sat half-tipsy on some doorstep with thinly covered feet. The result was that she was taken into a workhouse in the morning with her feet frozen. From the workhouse, three days later, she was sent to us with the front half of each foot livid and cold. We simply wrapped them in cotton-wool, and waited results. The toes shrivelled and hardened ("dry gangrene"), and the skin on the dorsum of the foot softened and became very fœtid; a line of demarcation formed across the middle of the instep. And this is her present condition. You could not see a better instance in proof of the statement that dry and moist gangrene are not two different diseases, but simply different results of the same process. We often see, as in the present instance, that the two co-exist. If a part dies outright without any inflammation or œdema preceding its death, and if circulation through it ceases absolutely before or at the date of the death, then there is a chance that the part, especially if in a thin person, and if it be a finger or toe, may shrivel and mummify instead of undergoing decomposition. This condition is what is known as dry gangrene. If, however, there have been time between the damage and the death for inflammatory œdema to occur, then the dead skin will be soft and pappy, and after awhile will exhale a disgusting fœtor from decomposition. Such, I believe, is the simple explanation of the relation of the two processes. Dry gangrene is seen at all ages, and moist gangrene at all ages. Dry occurs after frostbite exceptionally; after occlusion of arteries it is frequent, and this occlusion may be from senile arteritis ("gangræna senilis"), or from thrombosis or embolism, or after ligature. Given a thin, skinny foot or hand, and no intervening inflammatory swelling, and you will have "dry gangrene"; alter these conditions, and it will be "moist." One point in the treatment of gangrene from frostbite let me ask your especial attention to. *You are not to meddle.* If you amputate you run risk in two directions—you may first remove more than was absolutely necessary; and secondly, you may cause gangrene in the structures damaged by your knife. The wound left by your incision is in enfeebled parts, and it is certain not to heal well. You must leave the case to nature, and let the parts separate of themselves, or at most be content to remove the bones when they are exposed.

It is well known that those who have had erysipelas once are liable to it again, and that in some persons it recurs often. There is indeed a peculiar form of this disease in which recurrences are very frequent, and in which the same parts are always affected. In these cases there ceases to be any tendency to that indefinite spreading which is such a definite feature in first attacks. In these recurring cases the face is almost always the part affected. A woman who came under our observation last week offers us an excellent example of what I refer to. When I first saw her I took it for lupus erythematosus, the bat's-wing form being so definite. Her whole nose was dusky red, and from the sides of the nose there extended quite symmetrically two large wings, one on each cheek. The dusky tint, the abrupt margins, and the very slight swelling, gave to the whole a striking resemblance to the disease just mentioned. That it was not really such, but erysipelas, was, however, proved by the facts that it pitted on pressure, and that it had been present only a few days. The patient told us that she had been liable to it for sixteen years. She counted three severe attacks and innumerable slighter ones. The first was the worst, and then the inflammation, which commenced on her nose, travelled up on her scalp, and she was confined to bed for three weeks. Of late the inflammation had usually restricted itself to the nose and cheeks, and had never lasted more than a week or ten days. Before the attacks begin she is accustomed to feel "chilly and creepy," but seldom has a definite rigor. I have seen many cases just like this as to recurrence. In some the frequently repeated œdematous swelling ends by producing a permanent thickening of the eyelids, more especially of the lower one. The deformity from this cause may be considerable.

Dr. Barlow sent to me to-day a stout, healthy-looking woman with a somewhat peculiar form of palmar psoriasis. It had been present only about a year, and did not affect the middle of the palms. It occurred in the form of two large patches symmetrically placed—one over the region of the thumb, and the other over that of the little finger. In each instance it extended somewhat on the back of the hand, and the whole of the back of the little finger was involved. There were a few smaller patches in addition to these in front of the fingers and wrist. The symmetry was most marked, as also the exemption of the part most likely to be influenced by local irritation (middle of palm). The patient was fifty; there was no reason to suspect syphilis, nor had she ever before suffered from any skin disease. She did not think that the eruption had been caused by anything in her occupation, for she did nothing but ordinary house duties. Her menstruation had ceased three years ago, and since then she had felt somewhat nervous and weak, but there was no evidence of any special disorder. She had no patches in the psoriasis positions, excepting a single small scaly one over the middle of the left ulna. There were none on the feet. In commenting on the case, I expressed an opinion that the eruption was of the dartrous class, and perhaps to some extent due to senile changes. Its symmetry, and the multiplicity of its patches, seemed to separate it from syphilis. Its patches, which were remarkably rough and dry, had not the inflamed and congested borders which the syphilitic form often shows. In their appearance, in this respect, they much resembled what is known in Paris as "kératodermie."

THE CAUSE OF INTERMITTENT FEVERS AND THE NATURE OF MALARIA.(a)

By Professor E. KLEBS of Prague, and Professor Corr. TOMMASI-CRUDELI of Rome.

From the great interest and importance of the subject of malarial fever we are induced to give the following valuable paper by Professors Klebs and Crudeli the most prominent position in our journal, though appearing originally as a paper instead of a lecture.

Professor Klebs, having gone to Rome last spring with the intention of investigating the cause of malarial fevers, with the assistance of a Professor of the Roman University, Dr. Tommasi-Crudeli, he was soon able, thanks to the kindness of several Roman land-proprietors, to obtain the necessary material for those researches, from the soil and air of the infected districts, partly of Rome itself, partly of its environs, so ill-famed for fevers—that is, from the Roman Campagna and the Pontine Marshes.

From the introduction to their pamphlet we see that the two investigators followed a very deliberate plan in the performance of their task. First, they furnish us with a very able description of the mode of propagation of the malarial fevers. This naturally forms the basis of their investigations into the cause of the disease, the ideas about which have been so vague as to induce constant changes in the theories of its origin. A fresh theory takes the place of the previous one when recent facts and experience concerning the outbreak of the disease become known. If it be true that marshy districts are the favourite seats of intermittent fevers, it is not the less true that there are no fresh cases to be observed so long as a sufficiently high level of water separates the soil from the air. Further, it is no longer possible to consider malaria simply as a marsh miasm; for it is not found in every marshy district, whilst, on the contrary, it shows its existence in districts absolutely free from marshy ground—even where the soil has never been constantly wet. It is also impossible to state a distinct connexion between the chemical and geological structure of the soil and the manifestation of malaria. Again, the accumulation of decaying organic material in large quantities is not sufficient alone to explain an outbreak of intermittent fever. All these conditions, which, it is true, have their part in the manifestation of the miasm, are to be considered only as adjuvant causes. It has been established beyond doubt, that in malarial districts three distinct factors are necessary for the production of intermittent fevers—(1) high temperature of the air; (2) constant moisture of the soil; and (3) free access of air to the moist layers of the ground. Several pathologists have been induced by such facts to deny altogether a specific

(a) "Studien über die Ursache des Wechselfiebers und über die Natur der Malaria." Von Prof. E. Klebs in Prag, und Prof. Corr. Tommasi-Crudeli in Rom. (*Archiv für Experimentelle Pathologie und Pharmacologie*, Bd. xi.)

course of what is not common in English practice—a severe frostbite. A poor unfortunate, in a double sense, walked cause of malaria. They numbered this disease amongst those caused by cold, because, according to all experience, the last-named condition takes a great part in the outbreak of the disease; but they completely forgot that in countries free from malaria, cold alone never causes intermittent fevers, and that, on the other hand, the malarial poison causes those fevers without any previous cold. Others formed the idea that malaria might find its origin in a parasitic organism, whose development must necessarily depend not only on favourable external conditions, but on the existence of a specific germ. Beyond the analogy of intermittent fever with other infectious diseases undoubtedly of parasitic origin, such as relapsing fever and splenic fever, one circumstance goes far to corroborate the parasitic theory—namely, the fact that malaria undergoes a very rapid increase, when the known favourable conditions for its development are no longer restrained by culture of the soil. Italy furnishes numerous illustrations of this point, because the malarial places have nowhere else been known with such exactitude from ancient down to recent dates; and because the difference between ancient and modern times as regards the prevalence of these diseases is far too great to be attributed simply to chemical and physical changes in the soil. Such an enormous increase is much more easily explained by assuming that a parasitic organism might have spread to such a large extent because the obstacles to its development had ceased to exist. The fact that the malarial poison is limited chiefly to the layer of air situated immediately above the surface of the soil, points to a corpuscular nature of the poison, because such particles can spread farther only by motion of the air, whilst a hypothetical gas would find no difficulty in diffusing itself through the upper layers of the atmosphere—even if we have no regard to the fact that no such gas has ever been detected by chemical analysis.

During the last twenty years many efforts have been made to find a specific malarial fungus—with more or less success. Whilst a certain number of scientists charged some forms of algæ, found partly in the marshy water of malarial districts, partly in the marshy soil, with the production of malaria, but failed to give real proofs for their assertions, others endeavoured by experiments on animals to attain the solution of the problem. Griffini injected dogs and rabbits with dew collected from rice- and marshy fields, and produced by such injections elevations of the bodily temperature, but no distinct febrile attacks. Moreover, the spleen in those animals remained normal, and there was no augmentation of the organisms found in the dew to be observed in their blood. Similar injections made by Lanzi and Terrigi in the year 1870 gave no more distinct results, but in several of the animals which had perished after a smart attack of fever, the liver, the spleen, and also the blood of the portal vein, contained black pigment. Thus this method of investigation seemed not altogether unsuccessful. To establish a substantial theory of a parasitic origin of malarial diseases it is necessary to prove (1) the constant existence of a definite species of organism in the malaria-soil as well as in the air situated above such a soil; (2) that this same species of organisms is alone sufficient, without the concurrence of any other disease-generator, to produce true intermittent fever. To obtain the latter proof it is also indispensable to experiment on animals; and such an experiment would be the more conclusive, the better we should succeed in isolating an *active* organism from the marshy soil, and in introducing it in a suitable medium into the living animal. Further, it would be necessary to have the three following conditions realised, to enable us to recognise the disease produced in the animal by the introduction of the organisms as true intermittent fever—namely, (1) the existence of distinctly intermittent feverish attacks; (2) the enlargement of the spleen in the characteristic form—that is, a well-defined firmness of that organ, which is distinguishable from the enlargement of the soft septic spleen; and (3) the absence of a noteworthy diminution of the weight of the animal, at least during the first feverish attacks. Concerning the first-named condition, it is true that, in the graver forms of malarial infection in men, the fever often enough takes on a continued character, or has it from the beginning (*perniciosa*); so that in the animal also a continued fever would not perfectly exclude the existence of malarial infection. Another reason, of some moment, tending to show that domestic animals generally are unfitted for experiments on malaria, seems to be their oft-observed immunity from intermittent fevers in malarial districts. Still, this is not absolutely proved; and the authors assume, on somewhat hypothetical grounds, that there might exist in the animals special protecting conditions against the infection with germs. But we shall soon see that the scruples in that direction have been unfounded. Lastly, we have to note another important kind of evidence for the malarial infection of animals; that is, the existence of the characteristic black pigment in the spleen, the liver, the marrow of the bones, and the blood—a pigment which contains iron in inorganic composition (recognisable by the blue colour after treatment with ferro-cyanide of potassium and hydrochloric acid—a reaction not to be obtained with hæmoglobin). From the existence of iron in that form it follows that during life, and in the interior of the otherwise unaltered blood-corpuscle, the hæmoglobin becomes decomposed and its iron set free by the influence of the malarial poison.

When the authors had been so far successful as to produce by injections of watery extracts from the marshy soil functional disorders and anatomical lesions in animals, which were completely in accordance with those following the natural infection with malaria, the task next to be undertaken was the isolation from the crude material of the active substance—that is, the true generator of the disease. If that germ belonged to a plant, it would be possible to isolate it from the accompanying organisms by cultivating it from the crude material in a medium suitable for its further development; for then the other organisms will gradually disappear. This method of fractional culture (*fractionirte Cultur*), applied successfully by Professor Klebs in other instances, gave the desired result in this case also. Lastly, it would be necessary to apply filtration for isolating the organisms absolutely. By injecting the liquid containing the organisms, and by comparing the results afforded by that injection with those following injection with the filtered liquid, it can be proved that the special organism alone is efficacious, whilst the second injection has no effect.

Besides those organisms which were taken from the marshy soil, the authors also cultivated germs in a special way, which they had collected from the air above the soil. At some places specially exposed to the malaria a large quantity of air taken from a very small distance above the ground was sucked through a ventilator of special construction, which permitted the collection of all corpuscular elements contained in the air on a comparatively small space—that is, on a small glass plate covered with a mixture of glycerine and isinglass. Examination with the microscope showed, amongst those particles of dust, rods in very small number and filiform elements of some length. When those elements were transmitted into fresh urine, free from germs, an abundant development of bacilli was shortly to be seen, which showed the same characters as those cultivated from the soil. It was possible, after repeating the breeding process several times in different mediums at a definite temperature, to obtain a development of schizomycetæ which showed constantly the same characteristics, whether the germs had been taken from the soil, the marshy water, or the air. These fungi appeared as small rods of 0·002 to 0·007 millimetres in length, growing into long twisted threads, which after some time became furnished with joints at the surface of the liquid exposed to the air, or formed the so-called enduring germs (*Dauersporen*) in their interior. Besides the characteristic form of the fungus, it is distinguished from other bacteria by its relations to the air. It is markedly aërobiotic. If air has no free access, or is excluded, it will not grow at all, or dies out. Inasmuch as the development of the fungi was so constant, it was probable that this organism was the true *bacillus malariæ*. The next problem that arose was to test its nature by injecting it into the living animal.

Before the experiments on the animals could be begun, it was necessary to determine exactly the average dimensions of the spleen as well as the average normal temperature. This done, the experimenters were able to define more exactly the pathological conditions of the injected animals.

In the first group of experiments two rabbits were injected with organisms collected from the slime and the air of the Pontine Marshes. Every one of them showed

intermittent fever after one injection. When they were killed they presented very marked enlargement of the spleen, which contained large masses of dark brown pigment. The spleen and the lymphatic glands contained very small, bright corpuscles, which developed, after twenty-four hours in a suitable medium, into threads filled with spores. Formation of pus or any other changes due to inflammatory or septic processes of the different organs were entirely absent.

In further experiments, cultivated bacilli taken from urine, or the isinglass mixture, furnished the material for the injections, and always with the same positive results. The soil, taken from different places in Rome itself and the Agro Romano, proved, in nearly every instance, efficacious also. But the injection with water standing over the marshy ground remained without effect.

Of course it was necessary also to try soil free from malaria. Professor Klebs took infusions of the soil of the garden in the pathological laboratory at Prague. The results remained in this case somewhat doubtful, because the animals became ill, but not in the same way as before, so that it seemed that a mere septic injection had taken place. Two rabbits became ill and died with symptoms of septic poisoning spontaneously at Rome, so that it was possible to compare the two processes directly; and the pathological conditions found in the dead bodies proved different in these latter cases, because pus was found, pigment was totally absent, and the spleen, although enlarged, had lost its firmness.

Afterwards Dr. Marchiafava at Rome was able to demonstrate spores and bacilli in the spleen, the marrow, and the blood of three persons who had died of pernicious fever, showing the same characters as those observed by Klebs and Tommasi-Crudeli.

In summarising the results of their investigations, the authors consider the following facts as proved:—(1) That it is possible to reproduce malarial infection in every form in rabbits in which it is known in men; (2) that the malaria produced artificially in animals is generated by organisms existing in the malarial soil at the time when the outbreak of the fever has not yet taken place. We see, therefore, that those experiments, although small in number, have led to very important results. It is to be hoped that they may become the starting-point for further investigations in the same direction. As the authors themselves allow, there are still many points which require further elucidation. But it is encouraging to see how, by a comparatively small number of careful experiments, good results can be arrived at, when a strictly logical and methodical course of investigation has been pursued.

Autopsies in Lesions of the Stomach.—In a paper read at the Société de Biologie, Dr. Dumaschino observed that as in France autopsies are not made until twenty-four hours after death, changes may be produced in the stomach (from cadaveric imbibition, *ramollissement*, post-mortem chemical action, etc.), imputable to the action of the gastric juice and decomposition of alimentary substances. These changes may be prevented by the injection into the stomach of alcohol at 80° by means of an œsophageal tube one or two hours after death. He exhibited the stomach of a child, two months old, into which such injection had been made. The mucous membrane was found in a perfect state of preservation, all the component structures being easily distinguishable by the microscope.—*Gaz. des Hop.*, January 8.

Sulphuric Acid as a Prophylactic in Cholera.—Dr. MacCormac, Consulting Physician to the Belfast Royal Hospital, has written two letters to the Secretary of State for India, urging the prophylactic use of dilute sulphuric acid during cholera epidemics. Everyone living within the affected area is to have ten drops in a teaspoonful of peppermint-water once or even twice daily. The remedy is, at all events, very economical, for a pennyworth of the acid in England will render 1200 persons "approximatively safe for one day and night." Dr. MacCormac relies apparently upon a solitary experience of its effects which he gained during the occurrence of cholera at Belfast in 1854; and it seems strange that the remedy should find support in what cannot but be considered a very remote and limited practice; but measures are to be at once taken to bring the "specific" under the notice of medical officers, both civil and military in India.—*Indian Medical Gazette*, December.

ORIGINAL COMMUNICATIONS.

PRACTICAL NOTES ON THE ORDINARY DISEASES OF INDIA,

ESPECIALLY THOSE PREVALENT IN BENGAL.

By Dr. CHEVERS.

(*Continued from page 365 of last volume.*)

NOTE ON TRUE ENTERIC FEVER IN INDIA.

My knowledge of the recent progress of this disease in the East has received several important accessions since the publication of my last chapter on the subject in September.

In his presidential address at the Epidemiological Society,(a) Sir Joseph Fayrer mentions that the Sanitary Commissioner's Report of 1877 says that, out of 233 cases of typhoid, 92, or 39 per cent., proved fatal; the admission-rate being 4·1 per 1000 of strength. It moreover appears that 2·45 per cent. occurred at or under 24 years of age; 1·55 at 25 to 29; 0·00 at 30 to 34; and few or none above that age; showing that the disease tells most severely on the younger men—in this respect resembling typhoid in England. Again, Dr. Bryden, in his report of the Statistical History of the European Army in India up to 1876 (published in 1878), says: "It has no geography; and it is a matter of popular observation that no regiment or battery escapes enteric fever *in the first year*, whatever cantonment of India may be selected." "Out of seventy-three bodies of men, two regiments and seven batteries only returned no case of enteric fever in the first year." And he gives the following analysis of 368 deaths that occurred between 1823 and 1876:—

Ages.	Total Deaths.
24 and under	255
25 to 29	90
30 to 34	17
35 to 39	4
40 and upwards	2

Seventy-five of these deaths occurred within three years after landing in India, and 94 per cent. of the total were among men under thirty years of age. In a memorandum which Sir Joseph Fayrer had lately received, Dr. Bryden wrote that, out of 132 deaths from enteric fever in 1878, 90 occurred in men who had been under twenty-two months in India.

Dr. Furnell's valuable paper on True Enteric Fever in Madras(b) appears to have been written before he read my second chapter on this disease. Far from doubting the existence of this malady in India, I there give my own experience of it during my last ten years' service, in addition to the experience of Twining, Ewart, Edward Goodeve, and others. Dr. Furnell's observation corroborates my own, to the effect that, hitherto, it has occurred very distinctly but not very frequently among the civil population of India. He says: "We have quite, in Madras (I mean the town proper), made up our minds not only to its existence, but to its being, occasionally, anything but rare. During the cold season of 1878-79 it was very common, and I had, in my wards, several times as many as half a dozen cases together. I was sceptical at one time of its common occurrence, but last year quite removed my doubts." Dr. Furnell gives one typical case in a Hindoo. He says that, previous to the occurrence of this case, he had not seen any cases in natives, or he had overlooked them. In like manner Dr. Porter, of the Madras Medical Department, states(c) that "reported cases of undoubted typhoid among natives are rare."

I have lately had a very interesting conversation with a practitioner of great experience in Ceylon, who informs me that True Enteric Fever is of such frequent occurrence in the *pettah* (native town) of Columbo, that he has, of late, found it very difficult to convince his younger medical brethren that some of their cases are examples of Paludal Remittent, and must be treated as such.

In discussing a case which they freely admit presents, in all other respects, the typical characteristics of True Enteric Fever, Dr. Gordon and other Indian observers appear to be met by the objection—Can this case be distinctly traced to

(a) Delivered November 5, 1879.
(b) *Medical Times and Gazette*, page 631, vol. ii. 1879.
(c) *Indian Medical Gazette*, April 1, 1878.

the direct effects of filth-poisoning? If not, we cannot accept it as an example of True Enteric Fever. Upon this point, I can only say that, in all probability, there is no country in the world in which impregnation of the soil with cesspool filth is so general as it is nearly throughout the Plains of India. I lately met with a correspondence which I had many years ago with the late Colonel James, then Executive Engineer of Berhampore, at the end of which he tells me that my prescription for the *cure* of the great tank attached to the barracks at that station had been successful. Marvellous to relate, the barrack drains were led into this otherwise noble sheet of water, out of which the soldiers used to drink! A brother-officer told me that he saw the water black, with bubbles of noxious gas floating upon its surface. It is not surprising that these most costly barracks were, after many years of terrible mortality, declared to be untenable by European troops. In writing upon the sanitary prospects of Calcutta, I once had occasion to inquire: Given a loaf of bread that has been thoroughly saturated with sewer-filth—how is it to be purified? and what means, within reach of our science, are to cleanse the loose soil of this city, which has thus soddened for two hundred years? The rural inhabitants of Bengal frequently change the locality of their dwellings. I have travelled over nearly the whole of the plain country of the Delta, and I believe that there are very few eligible localities which have not, at some time or other, been occupied by huts. Dr. William Palmer tells me that he has been particularly struck with this point, in its bearing upon the causation of Enteric Fever, when engaged in the examination of potable waters in his capacity of Chemical Examiner to Government. He very rarely found a Bengal water free of traces of contamination by animal filth. The Calcutta Midaun, a large grassy plain between the City and Fort William, is generally supposed to have been originally rice-fields. An apparently unexceptionable site for a new tank having been selected there, in what was imagined to be virgin soil, Dr. Palmer found the condition of the water to be such as to lead to the discovery that a village had formerly occupied that spot. I think that it may be fairly inquired—Is there any bazaar in India, accessible to European soldiers, in which a thirsty man may not obtain a draught of filth-impregnated water? Nay, more, is there any such place, out of the Presidency-towns which have good water supplies, in which there is the slightest hope of obtaining a draught of perfectly unexceptionable water?

Facts have recently been afforded by Surgeon-Major A. Clark,(d) and by Surgeon-Major Black,(e) showing that, although the recent experience of ten years in Natal led Dr. Brinsley Nicholson to conclude that True Typhoid had not occurred in that country, this disease prevailed rather extensively among our European Troops during the Zulu Campaign. We have thus placed before us the suggestive fact that very young soldiers, when conveyed by the most rapid means of transit, suffer, soon after arriving in India or in South Africa, from True Enteric Fever, a disease which appears to be rare among the native and civil European inhabitants of those countries. Consequently it is needful (1st), as Sir Joseph Fayrer points out, that, in selecting troops for service there, the men's age should be well considered; and (2nd) that a company or two of soldiers should be sent to India in slow-sailing vessels by the old route round the Cape, and that it should be most carefully observed whether True Enteric Fever occurs among them either during the voyage out or within the first six months of their residence in India.

(*To be continued.*)

A Bill has been introduced into the American Senate, the object of which is to compel railroad and steamboat companies, carrying passengers from one State to another, to make use of the best possible contrivances for the security of these passengers. The Bill proposes the appointment of five commissioners, to be nominated by the President and confirmed by the Senate, whose duty it shall be to decide what contrivances shall be used, and if they be inventions, to fix the rate of compensation to which the owners of the inventions shall be entitled for the use.

(d) As cited in Sir Joseph Fayrer's recent Presidential Address to the Epidemiological Society.

(e) *Medical Times and Gazette*, vol. ii. 1879, page 554.

HÆMORRHAGE WITH A CONTRACTED UTERUS.

By A. H. F. CAMERON, L.R.C.P. Edin., M.R.C.S. Eng.

It is generally assumed that the amount of contraction of the uterus after parturition is a fair gauge of the probability or not of hæmorrhage, and when good contraction is present the practitioner generally feels assured that there is little danger, and may thus be lulled into a false security, and perhaps be tempted to leave his patient at the most critical moment. But it is unquestionable that cases occur in which alarming hæmorrhage takes place while the uterus is well contracted. On the other hand, an enlargement of the uterus soon after delivery, *if unaccompanied by pain*, is, in my experience, unimportant. These views, though contrary to the current opinions among obstetricians, have been forced upon me by repeated experience, and I have been much interested by finding the same views enforced and ably illustrated in a very learned paper by Dr. Gooch, published in the *Medico-Chirurgical Transactions* for 1823. In this he says: "Experience has taught me that there are two circumstances in which a hæmorrhage sufficient to produce alarming symptoms may occur, though the uterus feels contracted in the ordinary degree."

The two classes of cases thus noted by Dr. Gooch are—1st. Cases in which, from some peculiarity of constitution, the patient is singularly prone to syncope. 2nd. Cases in which the force of the circulation is *extraordinarily* great, so as to overcome the *ordinary* closure of the orifices by the uterine contraction. I forbear to quote further, but must refer my readers to the paper itself.

The following case presents some features differing from those related by Dr. Gooch. The patient, a lady about forty years of age, has had several children, and her labours have been usually attended by a considerable amount of hæmorrhage. She is of a rheumatic constitution, and has suffered from endocarditis, and has now a soft systolic bruit, probably due to mitral incompetence. Her labours have been generally tedious, and, thinking that the exhaustion consequent on this tediousness might probably be the cause of the hæmorrhage, I determined to expedite delivery by the early application of the forceps, but the last two labours have been so quick that this has been impracticable; nevertheless, hæmorrhage has occurred to an alarming extent about three-quarters of an hour after delivery.

On the last occasion, as the placenta did not readily come away, I introduced my hand and removed it, thinking thus to excite reaction of the uterus and prevent hæmorrhage, but without effect. At the usual time, though the organ was well contracted, the alarming symptoms occurred; they were controlled, however, and the patient progressed favourably. For some days there was, however, a fœtid discharge, as had been the case after the previous confinement, and about the seventh day a rigor occurred, followed by a temperature of 103°; the next morning the temperature sank to the normal point, with a considerable purulent discharge, clearly indicating that something had been retained in the uterus. The placenta had been carefully examined and found entire; no part of that, therefore, could have been the cause of the symptoms, but I observed that the uterine surface had a roughened appearance, though there was no apparent adhesion. May it not have been the case that some portions of the placental structure, sufficient to prevent the closure of the orifices of the uterine vessels, may have remained behind? This would be probably sufficient to set up hæmorrhage at that period, when, I think, some relaxation of the uterus usually takes place, viz., about three-quarters of an hour after delivery.

This, too, may account for the fœtid discharge by the natural decomposition of the small portions of placental structure referred to. It must be remembered, too, that the patient had a weak and ineffective heart, and my experience leads me to infer that any weakness or diseased condition of the heart has a decided tendency to the production of post-partum hæmorrhage, and may perhaps be the explanation of many of those cases classified by Dr. Gooch under his first head. I have consulted Dr. Angus Macdonald's work on the bearings of heart disease upon parturition, but do not find that he acknowledges hæmorrhage as being referable to this condition. He says (page 204), "at the labour the chief

evil effects seem to me to be produced from the exhaustion of the weak heart by the extra strain it is subjected to during the second stage." All practitioners, I think, will agree with these views, but I do not think they exclude the opinion which I have mentioned above, that post-partum hæmorrhage is frequent when the heart's action is defective. Why it should be so I do not venture to say.

Liverpool.

KING WILLIAM'S TOWN, KAFFRARIA: STATISTICS OF DISEASE.

By CHARLES JAMES EGAN, A.B.T.C.D., M.R.C.S.E.

In some papers published in the *Medical Times and Gazette* during 1877, I gave some statistics of disease as met with in King William's Town, Kaffraria, which I consider gave a very favourable idea of the health of this part of South Africa. At that time I made a rough estimate of the death-rate as about 25 per 1000; but since then I have worked out an estimate of the death-rate which is much more accurate. This I have made from the following data:—First, a census taken in the year 1864, which gave a European population, exclusive of the garrison, of 2054; and another census taken in 1875, which gave a population of 3143—showing an increase in eleven years of 1089. From these I have made out a table giving in a decimal proportion the probable annual increase of the population.

The number of deaths I have taken from the annual report of the Burial Board. A new cemetery was opened in 1866, where all the burials from the town are made, and proper registers of interments from that time have been kept, classified according as they were derived—(1) from the country, (2) from the garrison, (3) from the hospital, and (4) from the town. The first and second classes are excluded from my calculations, and I take half of the interments derived from the hospital, as many of the patients admitted to hospital (indeed, the largest number) come from the country.

From these data I have made out the following table. The returns for the years 1868 and 1869 appear exceptional—1868 showing too small a death-rate, and 1869 too large a one. The same is seen in the years 1870 and 1871. This I think is not to be accounted for by any unusual diminution or increase of disease in those years, but from a stasis in the increase of the population in the years 1868 and 1870, and an influx of population in 1869 and 1871.

		Population.	Deaths.	Rate per 1000.
Population	1864 . . 2054	—	—	—
	1865 . . + 49	2103	—	—
	1866 . . + 59	2162	—	—
	1867 . . + 69	2231	40	17·92
	1868 . . + 79	2310	34	13·89
	1869 . . + 89	2399	55	22·92
	1870 . . + 99	2498	37	14·08
	1871 . . +109	2607	54	20·71
	1872 . . +119	2726	38	13·93
	1873 . . +129	2855	55	18·70
	1874 . . +139	2994	59	19·70
	1875 . . +149	3143	60	19·09
	1876 . . +159	3302	57	17·23
				17·81

This of course is not a very accurate estimate, but I think from it we may allow the average annual death-rate to be about 18 per 1000.

I wish now to record a few statistics of a very different and more unfavourable character, produced by various causes, principally drought and war.

By reference to a paper on the Meteorology of King William's Town (*Medical Times and Gazette*, April 7, 1877) it will be seen that the mean annual temperature of this place is about 60° Fahr., and the mean rainfall 27·0 inches. I was absent during 1877, not resuming practice until March 1, 1878, and no statistics, such as I had been in the habit of keeping, were taken during my absence. But during the latter half of 1877 scarcely any rain fell, and during the year 1878 it only amounted to 13·35 inches—just one-half of the average rain-fall. The following table shows the temperature and rainfall for nine months of the year 1878:—

		Autumn.	Winter.	Spring.
Mean temperature,	1870 to 1875	60°	52°	61°
,, ,,	1878	62	46	64
Highest ,,	1870 to 1875	98	88	99
,, ,,	1878	94	84	101
Lowest ,,	1870 to 1875	27	24	27
,, ,,	1878	32	26	29
Rainfall	1870 to 1875	7·95in.	4·23in.	6·10in.
,,	1878	5·68	0·36	6·00

From this it will be seen that the temperature of the autumn (March, April, and May) 1878, and the spring (September, October, and November) is above the average; while that of the winter months (June, July, and August) is below the average. During the winter there was a continuance of hot dry winds during the day, and sharp frosts at night. The rain-fall during January and February only amounted to 0·50 of an inch, and 4·58 inches of the spring rain fell during the latter days of November.

In consequence of this want of rain, the river which passes by the town ceased to flow; and water was only obtainable from reaches of deep water occurring in its course (all the rivers in this part of the country run in very low beds, forming in some places, for a distance of perhaps one or two hundred yards, reaches of water ten to twenty feet deep; in other parts running over rocks and stones). The water-supply of the town had to be taken from these reaches, where it became stagnant and bad. Besides the want of rain to keep up the supply, the demand for water was largely increased on account of the influx of the country population; all the farmers with their families from the country districts having to seek refuge in the town on account of the outbreak of the Kaffir War, and at the same time they brought with them for safety a large amount of stock.

Thus was produced another source of disease, viz., overcrowding. The population was more than double, the house accommodation remaining the same—two or three families sometimes occupying a house barely large enough for one; or else living in small shanties suddenly built up of corrugated iron or wood—the former being especially unhealthy on account of their becoming intensely hot during the day and very cold at night. I have noted a difference of from 6° to 8° increase of temperature inside these iron shanties during the day from that marked outside in the shade. Many families, also, had nothing but bad tents to live in.

The farms being deserted, and water being scarce, produced another source of disease—viz., want of milk, butter, and vegetables. Potatoes that used to be got for 4s. per 100 lbs. could scarcely be got for 50s. Milk and butter could not be got at all, and those who could afford it were obliged to use these articles preserved in tin, imported from Europe (and this want of fresh milk especially affected the juvenile portion of the community); and the only vegetables to be had were those imported from Europe.

The drought alone would not have caused this dearth of milk and vegetables if it had not been for the war, which obliged the farming population to leave their occupation and crowd into town, along with their stock, thus causing the water-supply of the town to be insufficient for the demand.

We have, therefore, here a certain number of factors sufficient to cause disease in any community—viz., bad and deficient supply of water; overcrowding; and want of vegetable food and milk (as a rule this is one of the best supplied towns on the frontier in regard to vegetables).

The following statistics will show how these circumstances affected the populations:—

During the years 1870 to 1873 the number of cases of typhoid fever attended by me amounted altogether to 84 (*vide Medical Times and Gazette*, September 29, 1877), while during the nine months from March 1 to December 31, 1878, I attended 97 cases, 12 of which ended fatally. Besides this, I attended 90 cases, with one death, of a form of remittent fever with bilious complications; it was a form of fever of which I had previously seen very few cases in this town. It usually lasted about fourteen days, with exacerbations during the afternoon and night, and remissions in the morning and forenoon; the skin appearing yellow, and in some cases almost jaundiced; the bowels sluggish, and the motions dark-coloured and offensive.

Of simple continued fever, lasting from seven to nine days, 168 cases were attended; whereas the average per annum of such cases for the eight preceding years was about 50.

We have thus, during nine months of the year 1878, 355 cases of continued fever against an average of 64.

I see in a paper by Dr. Nicholson, in the *Medical Times and Gazette* for July 5, 1879, that he states that he never saw or heard of a true case of typhoid or enteric fever during his residence in this part of South Africa. His experience is very different from mine, as there never has been a year since I first came here, in 1857, that I have not attended true cases of this disease, verified by post-mortem examinations, not only in my own private practice, but also in the civil and military hospitals in this town. But I have never met with a case of ague or intermittent fever originating in this place; the only cases of this fever that I have met with were in persons who had contracted the disease elsewhere.

The treatment which I usually followed in mild cases of typhoid fever was a mixture of quinine and sulphuric acid along with milk diet. The sulphuric acid appeared to be sufficient to restrain the tendency to diarrhœa without checking the action of the bowels too much. In some cases hæmorrhage from the bowels occurred, and I found a mixture of secalis cornuti and spt. terebinthinæ most useful in such cases.

In some cases occurring in a house where I had previously attended a case of this fever, and where I suspected typhoid-poisoning, I administered sulphurous acid, and, as far as I could judge, with great benefit, the cases running a shorter and milder course.

Diarrhœa and dysentery were also more frequent during this year (1878) than usual. The average number of cases of diarrhœa for the years 1870 to 1875 was about 100 per annum, and of dysentery about 10 per annum, while during the nine months of 1878 I attended 163 cases of diarrhœa and 34 of dysentery.

The usual treatment I adopt in cases of dysentery is to administer at first a draught containing ten to fifteen drops of liq. morphiæ (B.P.), and then, two hours after, from ʒss. to ℈ij. of pulv. ipecacuanhæ. Should this be vomited, it is repeated in two hours, a sharp mustard poultice being first placed over the epigastrium. This dose of ipecacuanha is repeated about three times in the twenty-four hours, so long as the bloody stools and tenesmus last. Two or three days of this treatment is usually sufficient, and should the stools still contain blood, two grains of grey powder, with four of Dover's powder, are given every fourth hour. In mild cases I have used with benefit a mixture containing nit. acid. fort. gtt. v., tinct. opii gtt. vj., infus. simarubæ ʒj., pro dose 4tis horis. During the treatment an occasional laxative is given of olei ricini ʒij., spt. terebinth. ʒj. In chronic cases of a mild form I have found a pill of pulv. opii gr. ss., pulv. ipecac. gr. iij., and pulv. rhei gr. ij. given every fourth hour very useful.

In ordinary cases of diarrhœa I have found a mixture of sulphuric acid, tincture of cardamoms, and tincture of opium most useful.

Besides these cases there occurred during this same period an unusual number of cases of jaundice. During the six years 1870 to 1875 the average number of cases of jaundice attended by me amounted to about nine, but during these nine months twenty-five cases occurred, principally caused by inspissation of the bile and gall-stones, or originating from an attack of duodenitis; one of these was a case of yellow atrophy of the liver (published in *Medical Times and Gazette*, April 12, 1879).

Functional disorders of the liver and cases of congestion were also much more numerous than usual.

These statistics only show the result of my own private practice, which includes about one-half of the population of the town. The returns of the large Civil Hospital established here show an equal increase of these diseases.

Such are the results, in a small community, of war and drought, and they prove that war is no great benefit to the colony; although philanthropists at home and members of the Aborigines' Protection Society wish to make out that the colonists get up these wars for their own benefit. The natives here, instead of being ill-used, are far better off than most of the agricultural population at home. They can live at ease—in idleness if they choose, making their wives cultivate and grow what food they want; or if they wish to work, they get far better wages than are given at home. None will work under 2s. 6d. per diem; and common house-servants, Kaffir girls, as housemaids and nurserymaids, get 20s. and 25s. per month, with their food.

King William's Town.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

ST. THOMAS'S HOSPITAL.

(EYE DEPARTMENT.)

CASES OF SPONTANEOUS PANOPHTHALMITIS IN CHILDREN.

(Under the care of Mr. NETTLESHIP.)

Case 1.—*Destructive Acute Irido-Cyclitis with Effusion into Joints and Slight Fever in a Young Child: ? Pyæmic—History of former "Meningitis."*

JOHN L., aged four, rather delicate, is said to have been ill of "meningitis" for two or three weeks when three months old. In October, 1877, he had measles. No other illness.

April 22, 1878.—On getting out of bed at 7 a.m. he fell down and vomited. During the day he slept a great deal, lay quiet, and looked "deathly"; his mother thought he looked vacant, as if he could not see.

25th.—2 p.m.: Brought to St. Thomas's Hospital. General congestion of left eyeball, with purulent iritis; lymph in the pupil and doubtful haze of cornea—"panophthalmitis." The eye was first noticed to be watery yesterday (24th). He is fretful and feverish; when put down on his feet he cries, seems in pain, and walks tenderly on both limbs. Temperature (5 p.m.) 102·2°.

26th.—2 p.m.: Left knee and ankle somewhat swollen, tender, and hot; he also flinches when the elbows and hands are pinched, but this may be only from fear. Temperature 101·5°. Taken into the hospital under Dr. Ord's care. Evening temperature 98·6°.

During the next few days the temperature, taken twice daily, was never quite 100°, and was highest in the mornings. The tenderness and swelling of the left joints passed off, or were so slight a day or two after admission that some doubted whether there had been anything amiss except with the eye.

29th.—Eye better; lymph on iris partly absorbed, but pupil still blocked. Iris very vascular.

30th.—Pupil clearing. Eye still very red. Tension slightly −. Now no pain or tenderness of limb.

May 3.—Pupil nearly clear of lymph; lens hazy; eye still much congested. Discharged from ward.

June 4.—Distinct effusion into left knee-joint. Eye quiet.

18th.—Knee better.

Treatment.—Locally, atropine; internally, small doses of grey powder and steel wine.

He was seen again several months later; the eye was quiet but soft, and the lens more opaque.

The general disturbance in this case was so slight, and the local (joint) symptoms so trivial and transient, yielding almost at once to rest and warmth in bed, that had the child not been suffering from a destructive and very peculiar form of acute eye disease, probably his mother would not have sought advice. The effusion into the knee was, however, quite undoubted, the joint being puffy, and the patella floated up. The tenderness both of this joint and of several others was also quite distinct, the child flinching only when *joints* were pinched. The relapse of effusion into the left knee a month after his discharge was again quite unmistakable. These points were insisted upon by Mr. Nettleship, because some who saw the child only once or twice in the ward, when he was better, were inclined to attribute his symptoms chiefly to fear or fretfulness. No visceral disease was detected.

The nature of the case must, in Mr. Nettleship's opinion, remain doubtful. He remarked, however—first, that inflammation of the eye (iritis) does not occur in connexion with acute rheumatism in early life; secondly, that the characters and results of the eye attack in the present case were quite different from those of ordinary rheumatic iritis. He thought it possible that the case might be allied to pyæmia, in which disease the eye is occasionally lost by suppurative inflammation, and that the joint affection might have been of the same kind as that in the eye, in which organ a rapid exudation of lymph, threatening suppuration, was quickly and completely absorbed.

Case 2.—Inflammation of one Eyeball during a Febrile Illness in an Infant—Disease of the Vitreous simulating Glioma.

Richard B., a rather delicate baby, had "bronchitis and low fever" when eight months old, and was not expected to recover. During the illness the left eyelids swelled and closed and the eyeball was very red, but there was no discharge.

January 24, 1879.—Aged ten months. There is now no swelling of lids. There is moderate ciliary congestion of the left eye, the iris rather discoloured and the pupil excluded; the inner two-thirds of the iris prominently bulged forward as if by a small lens pushed forward from behind. Lens clear. A bright pinkish yellow reflection from deep in the eye behind the lens, which, when examined by focal light, shows no bloodvessels (the small size of the pupil, however, rendered complete examination by focal light impossible). The eyeball looked smaller than its fellow, and the tension was −2 or 3.

Mr. Nettleship remarked that the important practical point in this case lay in the diagnosis between glioma, and detachment of the retina or a morbid condition of the vitreous, the result of acute plastic inflammation of choroid or ciliary body.

The history of acute inflammatory symptoms, the presence of iritic adhesions, and the great reduction of the tension of the eyeball, all pointed strongly to the latter explanation as the more probable; glioma of the retina not giving rise either to severe iritis or inflammatory symptoms, and though often causing increase of tension, never in the early stages giving rise to its reduction. Nevertheless, it was deemed advisable to watch the case, and the mother brought the child regularly for some months, during which the eye shrank somewhat more, and all suspicion of glioma was given up.

Case 3.—Orbital Cellulitis with Proptosis during Scarlet Fever, with much Glandular Enlargement on the same side—Subsequent Atrophy of Optic Disc.

Francis N., a healthy boy, had scarlet fever at the end of July, 1878 (aged nine). The attack was severe, and was followed by "secondary fever" and delirium for some days. He had a bad sore throat and enlargement of the glands in the neck, chiefly on the right side, but no abscesses.

Early in the illness he complained of severe pain in the head passing to the right eye, and then of the eye being blind. Next he lost the power of moving the eye outwards, and it began to "project out" and to look dull "like a dead sheep's eye"; it was not red, and there was no discharge.

When he was brought to St. Thomas's Hospital, on October 24, 1878, the appearance and movements of the eye were natural, but the sight had remained as defective as at first. He could with this eye only count fingers at five feet, and the inner part of the field was defective. The media were clear, and there was neither iritis nor choroiditis. The optic disc was clear and very pale, its (real) outer half completely atrophied and forming a shelving cup, all the retinal vessels (arteries and veins) contracted to half their natural size, while the arteries (which pulsated on pressure) were bordered by well-marked white lines. The (real) inner part of the disc showed the least proof of atrophy, and this corresponded to the part of the field in which the best sight remained.

Mr. Nettleship thought the appearances suggestive of atrophy following neuritis of the trunk of the nerve rather than of intra-ocular neuritis (papillitis); and that the history pointed to an acute non-suppurating orbital cellulitis as the most probable explanation of the symptoms, the inflammation being communicated to the optic nerve. He referred to a case recorded lately by Knapp, in which orbital cellulitis followed severe diphtheria, with, as in the present case, great glandular swelling on the same side.

EAST LONDON HOSPITAL FOR CHILDREN.

TUMOUR OF THE CRUS CEREBRI—DEATH BY TUBERCULAR MENINGITIS.

(Under the care of Dr. FRANCIS WARNER.)

Florence T. was admitted to the wards of the East London Hospital for Children, July 3, 1879. She was a delicate and somewhat emaciated girl, four years of age.

When seen, she was in a nearly comatose condition, with complete ptosis of the right eye. The features were not distorted, but the left eye was kept constantly partially open. She could not be induced to protrude her tongue; but it was seen to move in the mouth. There was much tendency to the accumulation of mucus about the teeth. There was at this time no strabismus, and the pupils were dilated and equal (No. 14 on the catheter-gauge). The head was not retracted. There were convulsive twitching movements, principally affecting the right arm. Both arms were at times thus affected, as also the right leg; but the left leg seldom twitched at all. The want of power in the left side of the body was marked. The child was too far comatose to allow of the possibility of determining the condition of sensation. The abdomen was retracted, and the skin over it inelastic. At times the face was much flushed. The *tâche cérébrale* was well marked across the abdomen, and the pressure of the clothes on the limbs produced a temporary local hyperæmia of the skin. In both hands the thumbs were usually turned in on the palms. Pulse 112 per minute, somewhat varying in force, but not markedly irregular. No coarse changes were discovered in the lungs.

There was no vomiting while under observation, except once after taking food; the bowels were costive. She had one general convulsion. Under observation coma became deeper; if disturbed she screamed, and then there was marked convulsive twitching of the right upper extremity, the movements principally affecting the fingers, but also the larger joints. Such movements also often occurred spontaneously, continuing during long periods. There were also some convulsive movements of the left arm; the left leg generally remained quiet. The respiratory rhythm was irregular. When the eyelids were raised, the child struggled and raised the right hand to her head, while the left hand, though twitching, could not be brought to execute purposive movements. There was slight reflex action on tickling the sole of either foot. On measurement there appeared no wasting of the left leg. When admitted the optic discs were normal, but the day before death the left disc was seen slightly blurred; the right was not seen. On several occasions the convulsive movements were almost confined to the right arm, suggesting some possible local irritative lesion of the left hemisphere, while the weakness of the left arm and leg, together with palsy of the motor oculi nerve on the right side, suggested a probable lesion of the right crus cerebri.

July 8.—Child still lay with the left eye partially closed. The exposed cornea was commencing to ulcerate; slight divergent strabismus. Next day there was very marked paralysis of the right motor oculi. She died quietly. The temperature varied from 100° to 101° Fahr., just touching 104° before death.

The following history was obtained:—The child had always been delicate, and never walked well. There were no indications of phthisis in the family. Eight months previously the child contracted whooping-cough, from the effects of which she had hardly recovered at the time of the onset of the present illness. Four months previous to admission the mother noticed that the left side of the body was cold as compared with the right side, the left hand hanging behind her, while the left leg swung awkwardly in walking. She then lost her appetite, and looked thin and ill, and attended once as an out-patient on account of the weakness of the left limbs. One day, a month before admission, on awaking from sleep, she was found unable to speak, and could only make a noise to indicate her wants; she did not recover her speech. Ten days before admission she was taken with an attack of screaming lasting five hours. Such attacks returned, with convulsive movements and slight vomiting. Ptosis of the right eye came on three days before admission.

Post-mortem Examination, eighteen hours after Death.—Convolutions distinctly flattened and packed together from ventricular effusion. Pia mater greasy-looking. Minute venous congestion. There were superficial deposits of caseous matter embedded in the surface of the lower portion of the left ascending parietal convolution, extending upward for about an inch from its commencement, and extending about three or four millimetres into the cortical grey matter. In the right hemisphere a caseous mass about the size of a pea was embedded in the cortical layers of the first frontal convolution. In the cerebellum were four small caseous masses near the surface, none larger than peas. At the base of the brain a thick layer of lymph covered all the structures between the middle lobes, including both third nerves, which were dissected out from it. On removing the

lymph a small, lobulated, firm tumour, a quarter of an inch in diameter, was found projecting from the inner part of the anterior portion of the right crus in front of the corpus albicans. On section, it was seen that it extended into the crus, becoming gradually lost, and was not of a tuberculous nature as were the other tumours, but a new growth. Lymph and tubercle were abundant at the base of the brain; the ventricles contained much fluid very slightly albuminous (a little blood was mixed with the fluid). The septum lucidum and fornix were softened, but the basic ganglia were healthy. The membranes of the spinal cord were rather opaque. The lungs were scattered through with miliary tubercle, and the bronchial glands were caseous. All the abdominal organs contained tubercle.

Remarks.—The chief interest of this case lies in the lesion found in the crus cerebri, attended during life by partial left hemiplegia, and palsy of the right motor oculi nerve at a later period. It may, however, be supposed that the palsy of the cranial nerve was due to the local deposit of lymph around the nerve: this point could not be satisfactorily determined. The special convulsive movements of the right arm appear to have been due to the cortical lesion of the left ascending parietal convolution.

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Medical Times and Gazette.

SATURDAY, JANUARY 17, 1880.

PRIVATE ASYLUMS FOR THE INSANE.

It is much to be regretted that private asylums for the insane have almost come to be regarded in this part of the country as a necessary evil. This certainly would appear to be evidenced by the fact that no steady or determined effort is being made for their supersession by institutions of a more public character. That a certain number of private asylums will always exist, seems clear, as long as insanity may make its appearance among the better classes, where money is "no object," and where, unfortunately, too often a liberal expenditure in this direction is looked upon as redeeming any apparent want of family affection or friendly interest. Again, for the pauper lunatic there is nowadays ample provision of the most satisfactory kind, where he is better housed, better fed, and better looked after than he has ever been in his life before. But in England the great bulk of the middle-class have no refuge when such misfortune overtakes them except the private asylums, and the accommodation which these asylums can afford is very often of a most inferior description, and the conditions under which patients are placed are far from favourable to recovery. In Scotland this is not the case, for there in many places provision is made for paying patients, either in the county asylum itself or in a separate building within the asylum grounds and under the same control and management as the pauper establishment. There can be no question of the superiority of this plan, whether as regards economy or efficiency, but it is only made possible by the comparatively small number of patients in these institutions, rendering them easily superintended by one man—a condition of things obviously different from what prevails in most parts of England. It would be well if some enlightened county or borough took this matter up, if the law would permit them to do so; but we fear that if anything is to be done in the direction indicated it must be done by private enterprise or munificence. This state of things is the more to be regretted, inasmuch as the middle class—that which is most likely to be affected by improved modes of management and treatment—is, so to speak, left behind, whilst the condition of the poorer and the richer is gradually becoming ameliorated. The first great alteration in the management of the insane, with which in this country the name of Conolly will ever be associated, began in our public asylums, and thence spread to the others. But in recent days a decided forward movement has begun in connexion with the highest class of private institutions for the insane, which is well worthy of attention. We had occasion to allude to one phase of this, as illustrated by Dr. Langdon Down's system for training imbeciles, some time ago, and we would now venture to draw attention to something of a similar kind begun by Dr. Batty Tuke in a private asylum called Saughton Hall, near Edinburgh.

We have now before us the first of a series of triennial reports which Dr. Tuke proposes to publish, and there are in it references to two features which appear to us to be well worthy of more extensive publicity than can be afforded by any such reports. When Superintendent of the Fife and Kinross County Lunatic Asylum, Dr. Tuke was induced to make an experiment, which succeeded so well that it encouraged his successors and others to persevere in it, and even to extend it. This was neither more nor less than doing away, as far as possible, with the system of locked doors in the Asylum, and thus converting the institution into a hospital for those diseased in mind, rather than a prison for those whom it is not safe to leave at large. The success obtained was indisputable, and this too without any addition to the staff, for it is perfectly easy to dispense with locks, bolts, and bars where personal supervision is unstinted. The system is described as having a decidedly soothing effect on the minds of many patients, and a sharpening power on the attendants themselves. This plan has received a still further development under the management of Dr. James Rutherford, of the Barony Asylum, near Glasgow, where, with 450 patients—some of them certainly not of the most pleasant sort—every door is left unlocked. Such a result in effect does away with an objection which would rise to the lips of many. The system introduced by Dr. Tuke in the Fife and Kinross Asylum applied undoubtedly, in the first instance, to a set of lunatics coming from districts where there were no large cities, and where the community was in the main agricultural, and totally unlike the ferocious blackguards who congregate in some of the lowest parts of places like London. But we may safely say that any system which will apply to Glasgow may without great risk be applied also even to London. We cannot very well conceive, however, an

asylum receiving all kinds of patients being conducted in this manner without a considerable body of attendants. There are, moreover, certain forms of insanity in males, and still more in females, which almost necessitate seclusion, and if locks are not used, human vigilance must take its place. Nevertheless, we hold that the plan which has been introduced by Dr. Tuke, first into a public, and now into his private asylum, ought to be extended as widely as possible —above all, in private asylums.

The other improvement referred to by Dr. Tuke in his report is the introduction of the lady element into the treatment of the higher classes of the weak-minded and absolutely insane. This again seems to us to be a very real step in advance. We have seen its advantage in our hospitals, and its extension to the better class of lunatic asylums is merely a question of time. Where ladies of weak intellect are concerned it must be a real boon, for, however skilful a nurse or attendant, it must be always more or less galling for one of superior breeding to be controlled or guided by such. There are certain difficulties in the way of extending the benefits of this system to all kinds and degrees of male patients; but in private asylums the difficulties should not, save in a few instances, be insuperable. At all events, we heartily congratulate Dr. Tuke on the success of what seem to us two most important steps in advance in the treatment and management of lunatics. We only hope his efforts will not cease at this point.

CASES ILLUSTRATING THE CONNEXION BETWEEN PHTHISIS AND BRAIN DISEASE.

Two cases of lung disease, with secondary brain complication and paralysis, published early this year by Professor Senator of Berlin ("Zur Diagnostik der Hirnerkrankungen" —*Berliner Klin. Wochenschrift*, Nos. 4, 5, 6, 1879), and to which our attention has recently been directed, are of so interesting and unusual a character that an abstract of them cannot but be acceptable to our readers even now. Later on in this article we shall bring forward some other cases belonging to the same category, but more interesting from the light they throw on cerebral localisation than from their etiology.

The first case which Professor Senator describes is that of a man, aged thirty, admitted under his care on July 31, 1878, with dulness of the upper lobe of the right lung, bronchial breathing, not very abundant bubbling râles of medium size, cough, and rather scanty expectoration of a somewhat putrid character. With the exception of some fever in the afternoon, and occasional diarrhœa, his general health was as yet but little impaired, and he did not at any rate require to keep his bed. The aspect of affairs soon altered. On the 4th of August he first noticed that his right hand was weak, and that he dropped his spoon at meals. On August 5 it was found that all the fingers of this hand were partially paralysed, and could be neither flexed nor extended properly. There was no alteration of the sensibility of the skin, but the whole right hand and forearm were warmer than the left and perspired freely. The next day voluntary movements of the hand were quite abolished, and the forearm seemed somewhat œdematous in comparison with the left.

The forearm muscles proper became paralysed on the 7th of August; on the 8th the patient had an epileptiform fit with loss of consciousness, and beginning with twitchings in the right arm. These fits recurred on the two following days with different degrees of intensity, the right side of the body being alone convulsed, with scarcely impaired consciousness in one of them. On August 11 the muscles supplied by the lower branches of the facial nerve were paralysed; in the next two days the power of voluntary movement of the right leg was lost. Sensation everywhere remained intact, but the patient gave an inaccurate account of the position of his limbs. On August 14 symptoms of aphasia appeared, and on August 16 he only answered "yes" or "no" to questions, and that not always coherently. From this time he gradually became apathetic, and then comatose, and died on August 19. The electrical irritability of the arms was found the day before death to be the same on the two sides, but the circumference of the right arm on measurement was about half a centimetre less than that of the left; whereas on August 7 the latter was a centimetre the smaller. The ophthalmoscope gave no clue to the nature of the brain-disease. The pulse was not retarded and ranged between 92 and 112. The highest evening temperature was 39·4° C. on August 13; the highest morning 39·3° on August 14.

A cavity was detected at the right apex some days before the patient's death. We pass over the details of the post-mortem examination of the phthisical lungs, to give a brief note of the state of the brain. In the left hemisphere an abscess was found, containing about fifty grammes of foul pus, and extending from close under the pia mater to about half a centimetre from the roof of the lateral ventricle. The corpus striatum and optic thalamus were intact. The exact position occupied by the abscess, as far as could be made out, was the region of the ascending frontal convolution,(a) and especially where it borders the fissure of Rolando, and a small part of the neighbouring first and third frontal convolutions. The ascending parietal convolution was slightly discoloured and flattened on the side towards the fissure of Rolando, but otherwise scarcely affected by the abscess.

There was no sign of any old or recent injury to the skull. Except a couple of spoonfuls of serum in the ventricles, the rest of the brain—pons, crura cerebri, and medulla oblongata —were healthy, as well as the bloodvessels at the base.

The diagnosis of the disease was doubtful during life. It lay between cysticercus (the patient having once suffered from tapeworm), tubercle, and abscess. The post-mortem showed that the first two contingencies were inadmissible. The absence of a rigor, Senator specially observes, must not be taken as negativing the existence of abscess.

The great interest of this case arises, first, from the connexion between the abscess and the ulceration of the lungs; and secondly, from the nervous symptoms produced by the peculiar situation of the abscess. The possible dependence of cerebral abscess on lung disease, first pointed out in 1853 by Sir W. Gull, has since been insisted on by Biermer, R. Meyer, and Huguenin; but from 1867, when Meyer collected and published eighty-nine cases of all forms of this affection, eleven of which were complicated with suppuration in the lungs, until the end of 1878, only ten cases had appeared in the English and foreign medical journals in which the reporters had mentioned the existence of pulmonary disease, and in several of these they only spoke of it casually, as if it could have no possible bearing on the production of the abscesses. Senator gives references to twenty-six cases of abscess of the brain, published between 1867 and 1878, in which are included the ten above referred to, the remaining sixteen being described by the writers as "idiopathic." This fact alone shows how important it is that the attention of the profession should be directed to the relation of pulmonary disease to cerebral abscess. The physiological

(a) Professor Senator speaks, in first describing the relations of the abscess, of the "second frontal convolution" (*zweite Stirnwindung*) as the most involved (*loc. cit.*, page 43), but it is clear, not only from what we know of the "motor centre" of the cortex, and also from his own after-statement (*loc. cit.*, page 61), that "the motor disturbances must be explained by the disease of the ascending frontal convolution (*vorderen Centralwindung*)," that he was in error in speaking of the second frontal convolution.

researches of Hitzig, Ferrier, and others, have left little doubt that part of the cortex of the brain has motor functions, and the results of pathological observation everyday add confirmation to this view. Having recently spoken of this cortical centre in reviewing Dr. Decaisne's work "Des Paralysies Corticales du Membre Supérieur" (*Medical Times and Gazette*, November 1, 1879, page 511), we need say little further with regard to cerebral localisation in Dr. Senator's case than that the absence of lesion of the left ascending parietal convolution, with complete paralysis of the right upper and lower extremities, is noteworthy. Certain peculiarities in the symptoms observed in this case deserve careful attention—(1.) The patient had disturbance of the muscular sense, so that he was unconscious of passive movements or changes of position in his right arm and leg. The same thing has been observed by Hitzig, Nothnägel, and Munk, after extirpation of the corresponding region of the brain in animals. The only other published case where this symptom was observed, and which was verified by an autopsy, is, as far as Senator knows, that of Gelpke (*Archiv der Heilkunde*, 1876, S. 418). (2.) His right arm was warmer than the left; it perspired more vigorously, and for one or two days was slightly œdematous, while its circumference diminished to a measurable degree during the short time the patient was in hospital. Senator believes that his is the only known case in which *cortical* disease of the brain and sweating on the paralysed side have been noted together. In disease of the large ganglia, from hæmorrhage, etc., sweating is, of course, by no means so very uncommon. The experimental results of Bochefontaine, Hitzig, and others, who found that extirpation or irritation of certain parts of the motor region of the cortex were followed by a rise of temperature in the opposite limb, are thus strengthened, if not confirmed, as are also those of Luchsinger, Nawrocki, and Adamkiewicz (*Medical Times and Gazette*, October 25, 1879, page 486), with reference to a cerebral centre of the sweat function. The apparent rapid atrophy of the muscles of the right arm and forearm in the last ten days of the patient's life, Professor Senator regards as due to a possible injury of the "giant" nerve-cells discovered by Betz in the motor region of the brain (*Medical Times and Gazette*, vol. ii. 1874, page 498), and which may perhaps have trophic functions analogous to those of the large cells in the anterior cornua of the spinal cord; but this is a question which cannot be settled without much further investigation. It is nearly certain, however, that the atrophy cannot be accounted for in this case by disuse of the particular muscles, for, though paralysed to the will, they were repeatedly violently contracted during the epileptiform seizures. With reference to these seizures, the fact that at first they could be abated by drinking salt-and-water, or by tying a band round the arm in which the twitchings began, is interesting, though of course frequently observed in true epilepsy, and of late in cortical disease (Charcot and Pitres, and others).

Senator's second case may be dismissed much more briefly than the first. Again, we have paralysis beginning in the right hand, extending to the lower branches of the facial nerve, then to the whole arm, and lastly to the right leg, in a man of twenty-nine, with phthisis and cavities in the left lung, the patient dying within eight days of the first onset of nervous symptoms. As in the first case, general sensibility was unaffected, but no convulsions occurred, and there was no aphasia. The bladder and rectum were not paralysed in either case. In the second, consciousness was preserved to the last. The post-mortem examination differed very materially, however, in the two cases, for in the second *no localised disease could be detected anywhere in the brain.* The most careful search revealed nothing but considerable dilatation of the bloodvessels of the substance of both hemispheres—if anything, more left than right,—general injection of the pia mater, and fulness of the large veins. Professor Senator calls attention to the onset of lobar caseous pneumonia with marked cyanosis in the last fortnight of his patient's life as possibly explaining the cerebral symptoms. Assuming coincident, but unevenly distributed, cerebral hyperæmia, it is not unlikely "that the motor centres, or tracts in the left hemisphere, were specially compressed, although no anatomical proof of this could be discovered." Cases like the above are, as Senator observes, very scantily represented in medical literature. Graves and Andral have referred to one or two of doubtful resemblance to it, but the nearest approach to it is one by Romberg and Henoch ("Clinische Beobachtungen"; Berlin, 1851, S. 45). Since Professor Senator published his paper, three other German physicians have recorded cases of phthisis with brain symptoms and paralysis. Dr. Goltdammer ("Kasinstische Mitheilungen zur Pathologie der Grosshirnrinde"—*Berl. Klin. Wochenschrift*, Nos. 24, 25, 1879), Professor Drasche, of Vienna ("Ein Fall corticaler Epilepsie"—*Wiener Med. Wochenschrift*, No. 39, 1879), and Dr. Bernhardt, of Berlin ("Klinische Beiträge, etc."—*Archiv für Psychiatrie*, Bd. iv., S. 698), the reference to whose paper we owe to Professor Drasche. Their cases, however, have no bearing on the connexion of phthisis and abscess of the brain, for the lesions met with in the brain were tubercular. They interest us mainly because of their bearing on the subject of cerebral localisation and the motor centre. Dr. Goltdammer's patient, a man of forty-two, with advanced phthisis, was seized ten days before death with headache, followed by epileptiform convulsions involving the left arm and left facial muscles, with loss of consciousness. Soon afterwards the left arm and the parts supplied by the buccal and ocular branches of the facial nerve became paralysed. The paralysis here never extended to the left leg, and the patient quickly died with high fever and coma. The right ascending frontal and parietal convolutions were found flattened, pale, and broader than normal, with the pia mater over them thickened and the seat of miliary tubercles. The grey substance of the median portion of these convolutions was softened at three spots, each about the size of a pea, and a deep section revealed a nodule of hæmorrhagic softening as large as a walnut near the middle of the fissure of Rolando. The softening was probably the result of obliteration of vessels, partly by tubercles in their adventitia, and partly by the compression of the thickened pia mater. The rest of the brain was healthy. Professor Drasche's case only differs from the last in the leg as well as the arm and face becoming paralysed. Here also there was loss of consciousness. The patient was again a male, aged twenty-four. The pia mater covering the ascending convolutions was found studded with caseous tubercular nodules, and there were grey miliary tubercles in the Sylvian fissure. The grey substance of the particular convolutions was softened. We have not been able as yet to read the details of Dr. Bernhardt's case, but it is nearly identical, according to Professor Drasche, with his and Dr. Goltdammer's. It will be clear, even from the meagre description we have given of these latter, that they by no means rival Senator's two cases in physiological or pathological interest. The termination of phthisis in tubercular meningitis is no rarity; it is only the special localisation of the tuberculosis and its products which arrests our attention here. Senator's cases stand out from the rest, especially his first, by the association of a rise of temperature with sweating in the paralysed arm, and by the curious affection of the muscular sense and possibly of the trophic nerves of the limb. It is these little differences between the symptoms which mark a series of roughly similar cases that should make us pause and think whether the cortex

of the brain is not even more complicated than many persons at present imagine. It seems not unlikely that in one and the same convolution there may be a series of ganglionic centres, each controlling a separate function, just as we have long known of the existence of such ganglia or "nuclei" in the floor of the fourth ventricle. It is better, however, to accumulate facts than to speculate prematurely.

THE CLINICAL SOCIETY.

On the evening of Friday, the 9th inst., the annual meeting of the Clinical Society was held in Berners-street, when the following list of office-bearers was elected for the ensuing twelve months:—*President:* E. Headlam Greenhow, M.D., F.R.S. *Vice-Presidents:* John S. Bristowe, M.D.; Thomas Buzzard, M.D.; Andrew Clark, M.D.; Robert Brudenell Carter; John Whitaker Hulke, F.R.S.; Thomas Smith. *Treasurer:* Christopher Heath. *Council:* Julius Althaus, M.D.; Thos. Barlow, M.D.; William Cayley, M.D.; Robert Farquharson, M.D.; James Frederick Goodhart, M.D.; James Edward Pollock, M.D.; George Vivian Poore, M.D.; Edmund Symes Thompson, M.D.; Thomas Tillyer Whipham, M.B.; Alfred Wiltshire, M.D.; Marcus Beck, M.S.; Edward Bellamy; William Bartlett Dalby; James Grey Glover, M.D.; John Langton; Charles Macnamara; Thomas Pickering Pick; Leonard William Sedgwick, M.D.; William F. Teevan; William Spencer Watson. *Honorary Secretaries:* Frederick Taylor, M.D.; F. Howard Marsh.

As is the custom of certain other societies, no special evening is set apart by the Clinical Society for this annual meeting, and the proceedings are generally limited to the reading of the Secretaries' and Treasurer's reports, and the moving of certain formal votes of thanks. In certain ways this has advantages: it certainly saves the time of the Society, but, inasmuch as only half an hour is devoted to the business part of the meeting, no time is given for what is sometimes an important matter—the discussion of the affairs of the Society generally. The Royal Medical and Chirurgical Society always devotes a special evening to the business of the annual meeting, and the plan is not without benefit as regards the welfare of the Society. The reports of the various officers of the Clinical Society were highly favourable, indicating sound progress. But connected with these we cannot help referring to the tendency—almost inevitable, it would seem—of saving up money, as evidenced by all societies which can do so. For whom and for what purpose is this done? We do not advocate the principle of hand to mouth. But surely when a society has secured such a balance as will tide it over a rainy day, it has done enough in the way of accumulation, particularly when it has neither house nor library to provide for; and we would suggest that there are ways enough of obviating the difficulties connected with a surplus without exactly wasting the money of societies in ways which need only be hinted at.

The first business of the evening, on the 9th, was to read the report of the "Chloral Committee," of which the following is an abstract:—Seventy special replies and three printed papers had been received by the Committee, in reply to nearly 1000 circulars distributed throughout the profession, followed a few months later by a second appeal made public through the freely accorded medium of the medical press. Twenty-nine answers state that, after extensive experience of chloral, in long-continued doses, no ill effects have been observed. Ten of these correspondents enjoy the special opportunities for observation afforded by asylum practice, and Mr. Curgenven, Dr. Theodore Williams, Dr. W. Squire, Dr. Buzzard, Dr Clifford Ailbutt, and others, furnish cases in which chloral had been regularly and beneficially taken for periods varying from two to ten years. Before proceeding to analyse the replies received from those who had observed inconvenient effects to follow the use of chloral, the Committee have thought it well to draw up a brief summary of what has already been recorded on the subject. Their special information has been arranged under the various headings of the schedule, thus:—*A. Nervous System.*—Fourteen answers record cases in which nervous debility, mental enfeeblement, and convulsive seizures appeared to follow the use of chloral; Dr. Maudsley, Dr. Clouston, and Dr. Lindsay expressing themselves as strongly opposed to its employment in insanity. *B. Circulatory System.*—Two answers under this heading note some cardiac enfeeblement. *C. Digestive System.*—Six replies mention digestive disturbance as occasionally following the administration of chloral. *D. Cutaneous.*—Nine correspondents give the details of cases in which they observed itching of skin, lichenous eruption, with deep flushing of face and head, following the taking of stimulants. *E.*—Two replies indicate the possibility of urinary irritation being produced by chloral. Inquiry amongst some of the leading druggists of the metropolis has not established the probability that there is any remarkable abuse by the public of the facilities which they enjoy, of purchasing for themselves any quantity of chloral. The drug, it may be mentioned, is not included by the Legislature amongst those the sale of which is guarded by the name and address of the purchaser being required to be registered by the vendor. In conclusion, the Committee wish to express their regret that, in spite of repeated appeals to individuals personally, and to the profession by circular, and through the medical press, they have failed to obtain any more definite information than that contained in the preceding report; and although the opinions expressed by numerous gentlemen of experience will, doubtless, be received with the respect which is their due, the Committee would have been glad if more facts, from which definite conclusions might have been drawn, had been placed at their disposal.

The Committee was an exceptionally strong one. Certain questions were framed, and nearly one thousand copies were circulated among members of the profession. But only seventy-three replies were returned, notwithstanding a second appeal made through the medium of the medical press. Such a barren result shows one or other of two things—either a profound want of interest in the subject on the part of the profession, or a condition of general contentment with the drug as commonly used. Our own impression is that such committees and such circulars are pretty well played out. We do not remember, during the space of many years, a single report on which we could place our finger with unqualified approbation. In nearly all of them the number of facts given are too few for the statistical method to be employed with any certainty or satisfaction, and too often the replies are of the most viewy and sketchy nature. In one of the most recent of these—the Medico-Chirurgical Report on Croup and Diphtheria—this was most characteristic, for, if memory fails not, there was not a single reply from one who had seen a real epidemic of diphtheria, where young and old were alike attacked: nearly all the really reliable information coming from children's hospitals. Undoubtedly great good resulted from the subsequent discussion on this report, and that probably was the reason why Sir William Jenner was eager for a debate on the report we are now considering, but some of the officials of the Society were against it, and the feeble attempt made to introduce one was stifled in its birth—rightly, we believe.

THE WEEK.

TOPICS OF THE DAY.

It will scarcely be deemed surprising that, considering the difficulties which have arisen in endeavouring to carry out

the Artisans' Dwellings Act, and the enormous expenses which have been already incurred, the representatives of the London ratepayers should consider it time to offer some remonstrances. With this object in view, a meeting of delegates from the London District Boards and Vestries was last week held at St. Martin's Vestry Hall, to consider what steps should be taken in the matter. The chairman, Mr. Watherston, in the course of a long explanation, contended that the fault was in the Act itself, which sought to localise certain classes of inhabitants, instead of, so to speak, allowing people to find their own level, according to the natural law of supply and demand, care being taken to displace gradually, and not all at once. But the worst feature of the Act, he showed, was that it was a direct encouragement to the least deserving class of landlord, the owners of the wretched habitations condemned as unfit for human habitations, who, being enabled to sell their dilapidated property at its full rental value, were thereby induced to allow it to fall into a state unfit for human habitation in order to secure its condemnation and ultimate purchase. After some discussion it was determined to appoint a committee to consider the whole subject and to draw up a report to be presented to an adjourned meeting of the conference.

A determined opposition has been organised to the Liverpool water-supply scheme; the Worcester and Shrewsbury Town Councils have held meetings, at each of which it was decided to oppose the Bill to be introduced in the coming session of Parliament, on the ground that the scheme would tend to injure the interests of Worcester, Shrewsbury, Bridgnorth, Bewdley, Tewkesbury, and Gloucester, all situate on the banks of the Severn, and interfere with the navigation of that river. It was determined that all the towns should join in a deputation to wait upon the Local Government Board on February 10, the object being to urge on the Government the necessity of treating the question of the water-supply of the district as a whole.

A novel and dangerous method of adulteration has recently been discovered in Paris. The scarcity of eggs has led some confectioners to endeavour to deceive their customers by using neutral chromate of lead to give their pastry a yellow tinge. M. Personne has exhibited to the Academy of Medicine some pastry seized by the police, the over-colouring of which attracted attention, and he warns the public to be on their guard against this poisonous ingredient, from which several persons have already suffered. Our neighbours would appear to be much in want of an Act to prevent the adulteration of articles of food.

It may not be generally known that amongst the many peculiar advantages enjoyed by the Society of Friends, a low rate of mortality is by no means the least. There would appear to be nothing special to account for this; nevertheless, the death-roll of the Quakers for the year 1879, which has just been published, gives a rate which, according to the number of members in Great Britain and Ireland, is very considerably below the general average. An analysis of the ages of the deceased members shows that this result is very largely contributed to by the small infantile mortality. During the past year there were only 13 deaths out of the total of 321, which were those of infants under one year; while the total number of deaths of children under the age of five years was only 27—a fact in marked difference with the infantile mortality among the general population of this country. Between five and ten years of age there were only 2 deaths; from ten to twenty, 12; from twenty to thirty, 9; from thirty to forty, 15; from forty to fifty, 22; from fifty to sixty, 28; from sixty to seventy, 56; while between seventy and eighty the highest ratio in any decade occurred, viz., 82. Between eighty and ninety, out of the 321 deaths there were no fewer than 63; and over ninety there were 5 deaths recorded. The proportion of deaths at advanced ages for the past year is in conformity with the general experience shown by past returns; but the total number of deaths recorded in 1879 is in excess of that registered for several recent years.

Our contemporary *Iron* observes, with some degree of truth, that inability to distinguish varieties and shades of colour, where it exists, probably depends more frequently on ignorance than on physical imperfection; and says that the only work on colour nomenclature has been long out of print, and is now comparatively seldom to be met with. It was published in Edinburgh in 1821, by Patrick Syme, the painter, brother of the eminent professor of that name, under the title of "Werner's Nomenclature of Colours," and giving, by means of patches of water-colours, examples of the colour terms employed by Werner, with the name of a substance in the animal, vegetable, and mineral kingdoms, of the same hue. Our contemporary thinks it would probably pay an enterprising publisher to issue such another scale, in the form of a text-book for technical and other schools, and as a manual of reference for naturalists and others, for whom Syme's book was originally intended.

The report of the Committee of Management of the Devonshire Hospital, Buxton, for the year 1879 gives a very satisfactory account of the manner in which the resources of the establishment are being increased. Some time since we noticed the intention of the Governors of the Cotton Districts Fund to apply a portion of the large surplus at their command in furthering the usefulness of this charity, and the report now issued announces that the extension of the Hospital is actually at this time in progress, so that eventually it will be augmented to 300 beds, or double the number more recently possessed, and treble the number available when the building was first opened. The amount to be spent in building by the Cotton District Fund is £24,000. The financial position of the Hospital at the end of the year was found to have been in some degree affected by the general depression of trade and the prevalence of wet weather, the latter, we presume, having lessened the number of visitors to Buxton, from whom a considerable amount is annually collected. The total receipts are stated to be £742 less than those of the preceding year, but, on the other hand, the expenditure has been less by £467, due to the somewhat smaller number of patients received, and to a slight reduction in the cost per patient. The annual meeting of the subscribers is appointed to be held on the first Saturday in April next.

On Saturday last the East London Waterworks Company were summoned before Mr. Lushington, at the Thames Police-court, at the instance of the Improved Industrial Dwellings Company, for unlawfully refusing and neglecting to furnish a proper supply of water, the rate for the same having been tendered and paid. The Water Company endeavoured to excuse themselves on the ground that the cisterns of the buildings in question were placed above the level required by law; but this was satisfactorily denied on behalf of the plaintiffs, who, moreover, showed that the occupants of the Industrial Dwellings had been put to much inconvenience by the neglect of the Water Company to fulfil their duties, while the directors had been served with notice that unless they provided a proper water-supply, steps would be taken to close the buildings as unfit for habitation. Over fifty summonses had been issued, and Mr. Lushington, after hearing a great deal of evidence, decided to inflict the full penalties of 40s. and costs in each summons, amounting in the aggregate to £60 and £6 6s. costs.

The gentleman who represented the Water Company announced his intention of consulting the Board as to an appeal, but he did not wish to imply that they would adopt that course.

The Metropolitan Asylums Board was engaged on Saturday last in a long discussion on the question raised by a letter from the Guardians of the Hackney Union as to the right of the Board to close the Homerton Hospital to small-pox patients, and appropriate it to persons suffering from other diseases. The Board ultimately agreed to reply to the Hackney Guardians that until the pressure upon the Homerton Hospital for the accommodation of fever patients be lessened, the reception of small-pox cases at the Small-pox Hospital cannot be resumed. A report respecting the Leavesden Asylum for the past year was also received and adopted. A deputation of the Asylums Board lately waited upon the President of the Local Government Board with reference to the recent judgment in the action respecting the Hampstead Small-pox Hospital, but the interview was private, and no particulars have transpired.

Public attention has been called to a disease of the eyes prevailing at present in the East-end of London, and known locally as "the blight." Although at present of a mild type, it has been pronounced by an experienced oculist to be of a highly infectious character, with a tendency to intensify in degree as the epidemic progresses, and he urgently advises that each case should be carefully isolated. He further remarks that, unless the masters and mistresses of schools fully realise the danger of such a disease, the mere appearance of weakness of the eyes will hardly arouse sufficient attention.

The *United Service Gazette* states that the future Director-General of the Medical Department of the Navy will be Dr. John Watt Reid, Deputy Inspector-General of Haslar Hospital. Dr. Reid entered the Navy in 1844, and saw active service in the Black Sea, in China, and on the West Coast of Africa, for which last he received promotion to the rank of Deputy Inspector-General. Since then he has had charge of Bermuda Hospital, and recently of Haslar Hospital.

At a meeting of the Sanitary Committee of Hull, held last week, the epidemic of measles which broke out in that town in November last was reported to be spreading, and in some districts the sanitary inspectors state the disease to be very bad. All the public schools, many private establishments, and several Sunday-schools have been temporarily closed.

REPORTED OUTBREAK OF TRICHINOSIS.

We are sorry to hear that a malady which has for some time affected the boys on board the training-ship *Cornwall* has been recognised as trichinosis by Mr. W. H. Power, of the Local Government Board. The symptoms were long doubtful; but one boy having died, his body was disinterred, and it is said trichinæ were found abundantly in the tissues. The malady is supposed to have had its origin in the use of some cheap American pork, but surely, if this has been the case, the cookery on board the *Cornwall* must have been of the most primitive description—if cookery it could be called, which did not bring the temperature of meat to the point where these parasites perish. We are tolerably familiar with such outbreaks in Germany, where *Schinken* (raw ham) and the various kinds of *Wurst* (sausage) are largely consumed. In these, smoking and drying constitute the only preparation for human use; but in this country, where boiling or roasting is commonly employed for food which is partaken of, we have heretofore escaped. It is true we have been warned against cheap American meat of various kinds, we know that much has been destroyed at Liverpool, and we also have heard that trichina disease has prevailed among pigs in certain districts in the United States; but, notwithstanding all this, we should desire to see the evidence as to this reported outbreak of trichinosis among us sifted to the uttermost before we accept it as binding on our judgment.

LECTURES AT THE ROYAL COLLEGE OF PHYSICIANS.

The lectures of the present year will be delivered at the College, Pall-mall East, on each of the following Wednesdays and Fridays, at five o'clock:—The Gulstonian Lectures by Dr. Gowers, February 20, 25, 27, on "Epilepsy"; the Croonian Lectures, by Dr. Cayley, March 3, 5, 10, on "Some Points in the Pathology and Treatment of Typhoid Fever"; and the Lumleian Lectures by Dr. W. Roberts, March 12, 17, 19, on "Researches on the Digestive Ferments, and the Preparation and Use of Artificially Digested Food." The Harveian Oration will this year be delivered by Dr. J. W. Ogle.

THE COPLAND FUND.

The Committee of the above Fund, which was instituted for the benefit of the widow and children of the late Mr. J. C. Copland, beg to announce that the subscriptions hitherto received amount only to £84 9s. As this sum is quite inadequate to meet the necessities of the case, the Committee are induced to solicit further contributions, recalling the facts of Mr. Copland's services to medical literature, especially in the assistance rendered by him in the composition of the well-known "Copland's Cyclopædia"; his own blameless character, and the suddenness of the visitation by which he was carried away in the prime of life, before he had time to make any adequate provision for his family. Subscriptions may be forwarded to the Treasurer, Dr. Semple, 8, Torrington-square, W.C., or to Arthur Norton, Esq., Secretary, 6, Wimpole-street, W.

UNIVERSITY OF EDINBURGH.

The matriculation returns for the past year 1879 have now been made up, and show a very satisfactory increase in all the faculties over the returns for 1878. The aggregate number of students who matriculated during the year was 2856, being an increase of 239 on the register of the previous year. Of these fully one-half belong to the Faculty of Medicine, the number of students who matriculated in that Faculty during the year being 1442, thus showing an increase of 149. The gradually augmented ratio of increase in this medical school is probably due in a great measure to the wide range of supply of students, to which India, our colonies, and even foreign countries largely contribute. The entries show that 622 of the students are from Scotland, 492 from England, 25 from Ireland, 89 from India, 174 from the different British colonies, and 40 from foreign countries. The proportion of students who took degrees is about one in eleven. During the year one fellowship of about £240 and one scholarship of about £65 have been added to the prizes to be gained by competitive examination in this Faculty. The new buildings for the medical school have been vigorously pressed forward during the past year, so that there is every prospect of some portion of them, especially the department of anatomy, being ready for occupation at the beginning of the winter session 1880-81.

THE HEALTH OF SCOTLAND FOR DECEMBER LAST.

The Registrar-General for Scotland reports that during the month of December last there were registered in the eight principal towns of that country the births of 3578 children. During the same period the deaths of 2897 persons were registered. Allowing for increase of population, this number is 319 below the December average of the last ten years, but

is 1064 above the number recorded during the previous month. The mortality was at the annual rate of 19 deaths per 1000 in Perth, 22 in Greenock, 23 in Dundee, 25 in Edinburgh and in Leith, 28 in Aberdeen, 30 in Glasgow, and 41 in Paisley. Diseases of the zymotic class proved fatal to 364 persons, or 12·6 per cent. of the whole mortality, but the prevalence of whooping-cough in Glasgow caused this rate to be slightly exceeded in that town. This latter disease, indeed, is shown as the most fatal epidemic, having caused no less than 116 deaths, or 4·0 per cent. of the total mortality. Scarlatina was responsible for 55 deaths, and 50 are attributed to fever, of which number 13 were tabulated as typhus, 32 as enteric, and 5 as simple continued fever. One death was caused by delirium tremens, and five by the direct effects of intemperance. Two males and four females were aged ninety years and upwards, the eldest of whom was the daughter of a farmer, who had reached the ripe age of ninety-six years.

THE DEATH OF M. HERBELIN.

The Paris Municipality only quite recently resolved that the names of any medical officers, students, or attendants who died in consequence of the execution of their duty should be inscribed on a tablet erected at the hospital at which the calamity occurred; and now an additional name calls for commemoration at the Sainte Eugénie. M. Herbelin, an interne, who has just died in the twenty-eighth year of his age, in consequence of diphtheria contracted in that hospital, makes the fifth victim during the last twelvemonth, three of the number having been internes. At the request of Dr. Lannelongue, whose *chef de service* he was, the President of the Republic conferred on him prior to his death the Cross of Officer of the Legion of Honour, which seems to have given great satisfaction to the profession in Paris. His obsequies, too, assumed a quasi-public character in order to testify the sense entertained by the Government, the Municipal authorities, and the profession, of the self-sacrificing nature of the services rendered by the deceased and so many of his predecessors. Among the large concourse present, besides the *élite* of the profession, were M. Lepère, Minister of the Interior; M. Hérold, Prefect of the Scine; a representative of M. Moring, Director of the Assistance Publique (who is himself ill); Professor Vulpian, Dean of the Faculty, etc. While fully sympathising with the admiration expressed for the devotion exhibited by so many of these victims, we cannot conceal from ourselves that the history of some of these events shows that, in a disease so locally communicable as diphtheria, sufficient precautions, which would have in nowise prevented due attention to the patient, have not always been taken, and that unnecessary risks of sacrificing valuable lives have been run. We also fear that these public testimonies will not contribute to the observation of greater caution in the future.

STEEVENS' HOSPITAL, DUBLIN.

By a strange coincidence, the two Clinical Physicianships to this Hospital are likely to be vacant at the same time. Dr. Grimshaw, the Senior Physician, has recently been appointed Registrar-General for Ireland, and is consequently about to resign his clinical appointment in the Hospital, and the Professorship of Theory and Practice of Medicine in the school attached thereto. The cause of the other vacancy is a sad one. Dr. Richard Bookey, Physician to the Hospital, and Lecturer on Institutes of Medicine in the school, died on the 7th inst. of chronic interstitial pneumonia, from which he had suffered for several years. Although only thirty-four years of age, he had won for himself a high reputation as a precise clinical teacher and as an original and distinguished student of physiology, histology, and pathology.

SIR DOMINIC J. CORRIGAN, BART., M.D.

By the latest accounts from Dublin we learn that this illustrious physician remains in a very precarious state.

THE LATE MR. HANCOCK.

At the last meeting of the Council of the Royal College of Surgeons it was resolved unanimously—"That the sincere condolence of the Council be, and is hereby offered to, Mrs. Hancock and her family in the irreparable loss which they have sustained by the decease of Mr. Henry Hancock. That the Council feel that by the death of Mr. Hancock they have lost not only a valued and esteemed personal friend, but a colleague who, throughout the whole of his long official career, has taken the keenest interest in the welfare of the College, and has worked with incessant energy for the good of the profession which he adorned."

HARVEIAN SOCIETY OF LONDON.

The annual meeting of this Society took place on January 8. The following is a list of officers of the Society for the year 1880:—*President*: *Henry Power, Esq. *Vice-Presidents*: George Eastes, M.B.; Robert Farquharson, M.D.; *E. J. Gant, Esq.; *W. H. Day, M.D. *Treasurer*: *James E. Pollock, M.D. *Hon. Secretaries*: J. Milner Fothergill, M.D.; George Field, Esq. *Council*: Henry Chas. Stewart, Esq.; T. Fitzpatrick, M.D.; H. E. Sewill, Esq.; H. T. Mapleson, Esq.; Edmund Owen, M.B.; T. Buzzard, M.D.; *G. C. P. Murray, M.D.; *W. Squire, M.D.; *G. Danford Thomas, M.D.; *W. Ward Leadam, M.D.; *J. W. Langmore, M.D.; *Owen Roberts, Esq. (An asterisk is prefixed to the names of those gentlemen who did not hold the same office the preceding year.) After an eloquent address by the late President, Dr. H. C. Stewart, a *conversazione* was held, and was largely attended. Objects of interest were shown by Mr. Samuelson, Sir Joseph Fayrer, Dr. Braxton Hicks, Mr. Seymour Haden, Dr. B. W. Richardson, Mr. Du Maurier, Mr. Ernest Hart, Dr. Farquharson, Mr. Malcolm Morris, Dr. G. C. P. Murray, Dr. Shepherd, Mr. Walter Pye, Mr. Power, Mr. W. R. Cheyne, Messrs. Hunt and Roskell, Messrs. Mortlock, Messrs. Wyon, Mr. Hawksley, etc. The meeting was a great success.

DUBLIN HOSPITAL SUNDAY FUND.

The Council of this Fund have just made the following award for the present year. The total sum available for distribution as the result of the collection made last November is £4125, compared with £3955 the previous year:—Sir Patrick Dun's Hospital receives £278 10s. 3d.; City of Dublin, £570 3s. 2d.; Steevens', £66 19s. 7d.; Meath, £378 16s. 9d.; Mercer's, £273 13s. 11d.; Whitworth, £72 1s. 11d.; Coombe, £327 4s. 7d.; Rotunda, £137 8s. 2d.; St. Mark's, £127 8s. 5d.; Eye and Ear Infirmary, £52 2s. 3d.; Convalescent Home, £224 13s. 1d.; Cork-street (Fever), £880 18s. 6d.; Adelaide, £443 11s. 1d.; the Orthopædic, £167 15s. 11d.; Monkstown, £123 12s. 5d. Total, £4125.

THE NEW PROFESSORS IN PARIS.

The *Union Médicale*, January 10, observes that of the three new professors, Dr. Alfred Fournier, M. Bouley, and Dr. Rouget, the first must be considered as the most fortunate, having been elected into the Academy of Medicine, and appointed to the new Chair of Cutaneous and Syphilitic Diseases in the Faculty in the same week. This chair, which was refused to Ricord twenty years ago, will now be in the efficient hands of his favourite and most able pupil, whose teaching has already made such an impression at the St. Louis. M. Bouley, the Inspector of Veterinary Schools, has accepted the Chair of Comparative Pathology at the Museum, and much is expected from one at once so learned and so

capable of imparting what he knows. The professorial succession of Claude Bernard has been divided—Professor Brown-Séquard having been some time since appointed to the Chair of Experimental Medicine at the Collége de France; and now Professor Rouget, of Montpellier, succeeds to his Chair of Physiology at the Museum.

THE ERASMUS WILSON TRUST.

Mr. Henry Trentham Butlin, F.R.C.S., of St. Bartholomew's Hospital, a Jacksonian Prize Essayist, has just been elected "Erasmus Wilson" Professor for the present year. His course will consist of three lectures "On the Structure and Nature of Certain Tumours."

THE ROYAL COLLEGE OF SURGEONS.

At the meeting of the Council of the Royal College of Surgeons, held on the 8th inst., the President of the College, Mr. Luther Holden, undertook, at the request of the Council, to deliver the next Hunterian Oration. Mr. Hulke, F.R.S., was elected a member of the Court of Examiners. Mr. Hulke and Mr. J. Wood have resigned their seats on the Board of Examiners. The vacancies thus created on the Board may be again filled by one Examiner in Anatomy and one in Physiology, or, we believe, by two Examiners in Physiology.

VITAL STATISTICS FOR THE COLONY OF QUEENSLAND.

The nineteenth annual report of the Registrar-General for the Colony of Queensland bears testimony to the steady manner in which our colonies increase year by year. This report, which is for the year 1878, shows that during that period 2388 persons were married, 7397 children were born, and 4220 persons died. During the year 14,505 additional names were added to the registers, the increase in 1877 having been only 13,496. It is calculated that there was 1 birth to every 28 persons living, and 1 death to every 49 persons living in the colony, during the year. The birth-rate in Queensland is higher than in either of the other Australian colonies, and the proportion of illegitimate births is 3·68 per cent. of the whole number in the year. The mortality of the year 1878 was heavy, considerably more so than in any year during the last decennium, excepting only that of 1875; the deaths to mean population for the year are in the proportion of 20·41 per 1000. The mortality amongst children has been large, but this is chiefly accounted for by the large proportion of children living in the community, as compared with many other places; the average infant mortality in Queensland shows favourably in comparison with that of England and Wales, and also with that of South Australia, but not with the average infant mortality of the Australian colonies generally. If we take the rate of infant mortality as an indication of the sanitary condition of a locality, it must be conceded that Brisbane is not a very healthy place; for while the death-rate of children under twelve months, in the year under review, was 27·59 in the country districts, it was 36·04 in Brisbane. Nevertheless, the general mortality in the latter town in 1878 compares favourably with that of several of the other towns in the colony. On turning to the causes of death, we find that dysentery proved the most fatal during 1878; whilst phthisis maintains its premier place among the constitutional diseases. The idea that obtained for many years, that the warm, dry climate of Queensland was favourable to persons suffering from pulmonary consumption, would at first sight appear not to be borne out by the statistics of disease in the colony; but it has to be remarked that the death-rate from phthisis in Queensland is considerably increased by the prevalence of the disease among Polynesians.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.

At the annual general meeting of the above Society, held on January 12, the following were the members elected as officers and councillors for the ensuing year:—*President:* *Alfred J. Woodhouse. *Vice-Presidents:* Resident—Charles James Fox, T. A. Rogers, *J. Walker, M.D.; Non-resident—David Hepburn (Edinburgh), Alfred Meara (India), *J. E. Rose (Liverpool). *Treasurer:* James Parkinson. *Librarian:* Felix-Weiss. *Curator:* C. S. Tomes, F.R.S. *Honorary Secretaries:* *Ashley Barrett; for foreign correspondence—*S. J. Hutchinson (Council), *F. Canton (Society). *Councillors:* Resident—E. B. West, J. S. Turner, T. Underwood, Oakley Coles, W. H. Woodhouse, *Edwin Saunders, F.R.C.S., *T. C. White, *G. Wallis, *W. F. Henry; Non-resident—J. Doherty (Dublin), W. R. Wood (Brighton), W. Hunt (Yeovil), T. W. G. Palmer (Cheltenham), *T. J. Browne Mason (Exeter), *W. Williamson (Aberdeen). The gentlemen whose names are marked with an asterisk are those of the new officers and councillors.

FROM ABROAD.

Professor Broca on Morbid Local Temperatures.

In relation to Prof. Peter's communication to the Académie de Médecine on Morbid Local Temperatures (*Medical Times and Gazette*, December 20, page 697), Prof. Broca, at the meeting of the Academy on December 30, related the researches which he had been engaged in on the subject. His communication is published in full in the *Bulletin* of that date, but is too long for insertion otherwise than by abstract.

Prof. Broca, after referring to the observations made long since by Forster, Hodgson, Demarquay, and others, on the influence of ligation of vessels on the temperature of the limbs, adverted to his own thermometrical observations both in individuals the subjects of spontaneous obliteration of the arteries of the lower extremity, and in those the subjects of embolism of these vessels. He has ascertained that the application of the thermometer enables us to distinguish simple localised embolus from the obliteration of the arterial system of the limb—a point of great importance in surgical practice, since, in the former case, when the obliteration is localised, we may by amputation cure the patient of the gangrene caused by this partial obliteration; while in the other case an operation would be useless, as it would be followed by gangrene of the wound. In embolism, then, thermometrical investigations have established that the temperature is increased at the level of the lesion, while it is at first diminished in the parts situated below this, but is afterwards re-established on the re-establishment of the collateral circulation. But if in place of embolism there is obliteration throughout the extent of the arterial system of the limb, the depression of temperature caused by the suppression of the circulation persists in consequence of the impossibility of the collateral circulation being established. If a thermometer is applied under these circumstances the temperature is found to keep diminishing from the root to the extremity of the limb. Prof. Broca states that on several occasions he has been able to determine, by means of the thermometer, whether the gangrene of a limb has been due to an embolic obliteration or to a general obliteration, and to employ the indication thus furnished in determining the propriety of surgical intervention.

His researches concerning the temperature of limbs after ligature and obliteration of arteries led M. Broca to an investigation of cerebral temperature, which he commenced in 1865 while engaged in his researches for the determination of the convolution of language. The employment of the thermometer enabled him to establish the diagnosis of acute and chronic *ramollissement*, and to determine on which side the cerebral lesion existed. For these researches he fixed around the head of the subjects submitted to his observation a crown of thermometers so disposed as to lead to as little loss as possible of heat by radiation. By his experiments made on individuals in a physiological condi-

tion—*internes, externes, infirmiers*, etc.—he ascertained that during cerebral work an increase of temperature is observable opposite the frontal lobe, while opposite to the temporal and occipital lobes no change is observable. Among the applications of thermometry in cerebral pathology, M. Broca first adverts to the observations which he has made on persons the subjects of old torticollis. Under the influence of this lesion they undergo an atrophy of the face and of the cranium, which exhibits a deformity analogous to that which has been described in the pelvis by Naegele, and termed by him the oblique oval pelvis. The temperature is diminished from four to six tenths of a degree on the side on which the deviation exists; and although this difference is very slight, and at a given moment insignificant, it exerts in the long run a considerable influence on the nutrition and development of the cranium and brain. No cerebral disease exists; but the conditions of the circulation are not the same, the obstacle to the passage of the blood being greater, owing to the increased inflexion of the carotid at its entrance into the cranium on that side.

But a much more important application, in a practical point of view, is that which consists in the diagnosis of cerebral embolism. This lesion has almost always its seat in the Sylvian or middle cerebral artery, and the temperature is indicated in the temporal region—a diminished temperature therefore being observable when this artery is obliterated. In this way Sylvian embolism is distinguishable from congestive or inflammatory cerebral or meningeal affections, which, like it, may affect the faculty of language. But partial atrophies and chronic *ramollissements*, followed by absorption of the cerebral cortex, which is replaced by a collection of serosity, may also give rise to a diminution of temporal temperature, and this has to be distinguished from that arising from embolism. Here is shown the analogy which exists between Sylvian embolism and femoral embolism. When the Sylvian region ceases to receive blood by its artery, blood is brought to it by the collateral channels, that is to say, by the vessels furnished by the pia mater, the branches of the anterior cerebral artery, and those of the posterior cerebral. These branches and the vascular networks which emanate from them become, therefore, the seat of an exaggerated circulation; and we then find that the occipital thermometer, and especially the frontal thermometer of the bad side, exhibit a higher temperature than those on the healthy side. This elevation of temperature, coinciding with the depression of the temporal temperature, characterises Sylvian embolism—just as the elevation of the temperature of the knee, coinciding with the depression of the temperature of the foot and the leg, characterises the obliteration of the lower part of the femoral.

Diagnoses of this kind are interesting in themselves, as they are also for prognosis, without any clear therapeutical indications being deducible from them; but there are also cases in which thermometrical exploration of the brain may render great service to the surgeon. It is acknowledged at the present day that simple depression of the cranium should not be treated by trephining, the injured persons recovering better without resorting to it, and their recovery generally proving definitive. But it is also known that certain individuals who have survived these injuries may, at the expiration of some months, some years, or even many years, become epileptic and present signs of chronic meningitis or encephalitis, which are reasonably attributed to the irritating action of bony fragments thrust in towards the cavity of the cranium. Under these circumstances many surgeons have had recourse to the trephine, and many successful results of such interference are on record. Still, this is an operation not lightly to be resorted to; and a man who has suffered from a depression of the skull is not thereby assured from ordinary cerebral affections; and the question arises, when cerebral symptoms appear a certain time after fracture with depression, whether they are or are not the consequence of the depression. This important diagnosis may be assisted by the study of cerebral temperatures. If there be an excess of heat at the level of the old seat of injury, we may admit that this is the seat of the cerebral irritation. But if the temperature here is normal, while a maximum of elevation is exhibited at some other point, we are led to an opposite conclusion, and trephining, indicated in the former case, is here inadmissible.

Prof. Broca agrees with Prof. Peter that the ordinary medical thermometer is the one best suited for these investigations. The scale of the one which he employs, however, extends from 17° + C. to + 43° C.; and the results are only obtained after a long application. To overcome this inconvenience, he had at first the idea of employing thermo-electrical instruments; but, having consulted MM. Froment and Foucault on the subject, they advised his employing the mercurial thermometer. It is this also that M. Béclard employs in his researches on muscular heat. Seguin's thermometer is not calculated for these investigations, as it does not admit of being attached to the part investigated; which, owing to the time required for ascertaining the temperature of the deeper parts, is necessary.

REVIEWS.

The Medical Profession. Being the Essay to which was awarded the First Carmichael Prize by the Royal College of Surgeons, Ireland, 1879. By Walter Rivington, B.A., M.B., and M.S. Lond., F.R.C.S. Eng.; Lecturer on Anatomy at the London Hospital Medical College; Surgeon to the London Hospital; Examiner in Anatomy, Royal College of Surgeons of England. Dublin: Fannin and Co. London: Longmans and Co.; Ballière, Tindall, and Cox. Edinburgh: Maclachlan and Stewart. 1879. Pp. 477.

This goodly-sized volume is the outcome of certainly a vast amount of patient and, we should think, very wearisome labour—such labour as would, to our thinking, be but poorly rewarded by the First Carmichael Prize of £200, though undoubtedly the honour and satisfaction of success must count for a good deal in the way of reward. The author tells us, in his preface, that "in accordance with the conditions of competition prescribed by Mr. Carmichael," he has aimed at giving, first of all, the actual facts relating to "the state of the Medical Profession, in its various departments of Physic, Surgery, and Pharmacy, in Great Britain and Ireland; the state of the Hospitals and Schools of Medicine, Surgery, and Pharmacy; and the states and modes of Examination, or of testing the Qualifications of Candidates, of the different Licensing Colleges or Corporations in Medicine, Surgery, and Pharmacy." In reading this, and in looking down the table of contents of the book, it seems rather surprising to find such subjects as "Schools of Pharmacy" and "Pharmaceutical Societies," "Herbalists" and "Advertising Quacks," included in a work entitled "The Medical Profession," but we must suppose that they were so included in accordance with the terms of Mr. Carmichael's will. The Public Services, Civil and Military, are of course described; and in dealing with the Corporations and the General Medical Council, Mr. Rivington gives some past as well as present history; and he "has entered into some criticisms, and made some suggestions for improvement." There seem to us to be but few things, indeed, relating to the profession that are not dealt with in Mr. Rivington's Essay. Prosecutions under the Acts of 1815 and 1858, and by the Defence Associations; the state of Practice before the Medical Act, the Act itself, and Medical Act Amendment Bills; Medical Societies, Benevolent Medical Societies, Medico-Political Associations, and the British Medical Association, are all noticed in detail, and commented on. The book is of a kind that hardly admits of criticism, except as to correctness of statements, and we cannot pretend to have examined it closely enough to entitle us to judge it on that point; but we must suppose that the Council of the Royal College of Surgeons of Ireland have satisfied themselves of its correctness as to facts, though they state that they are not in any way responsible for the opinions expressed in it. We had proposed to comment on the "suggestions for improvements," but forty-four pages of the work are devoted to them, and even the subject of Preliminary Education appears to take up sixteen pages, so that we cannot afford time or space to criticise even this portion of the work. We observe, however, that Mr. Rivington thinks that "the Preliminary Examination should be entrusted in each division of the kingdom to one or more of the Universities," and that he, naturally, considers that in England "the fittest authority would be the University of London." The subjects of the examination should, according to him, be "English, arithmetic, algebra, geometry, Latin, and Greek, and one or two modern languages." No student should be admitted to medical studies before he is

eighteen, and the age of twenty-two is quite early enough for the commencement of practice; and there is to be an examination at the end of every one of the four years that are to be devoted to medical study. This may all be very desirable, very necessary even, to produce a highly qualified practitioner; but what is to become of those districts, in town and country, where a medical man cannot make a clear income of £200 a year, if such a prolonged and costly education is to be required of every practitioner?

We have no doubt, however, that Mr. Rivington's "Carmichael Essay" will be found a very useful book of reference as to the recent history and the present state of the medical profession, and it assuredly does great credit to his industry.

Glaucoma: its Causes, Symptoms, Pathology, and Treatment. Being the Jacksonian Prize Essay for 1878. By Priestley Smith, M.R.C.S. London: J. and A. Churchill.

In no direction, perhaps, is the advance of ophthalmology so conspicuous as in the elucidation of some of the problems which a study of the subject of glaucoma involves; and, therefore, at such a stage of progress, its selection for the Jacksonian Prize Essay for 1878 could not but be advantageous.

The present volume is an outcome of that selection, representing, as it does, the essay to which the prize was lately awarded; its early publication, in its original form, having been undertaken for the sake of the exposition of views respecting the pathology and essential nature of the process or malady which differ somewhat from those that at present obtain. Under such conditions, we cannot but regard that the order pursued in the treatment of the subject labours under the serious disadvantage of involving all explanation of symptoms by the light of pathological views only discussed in subsequent chapters. To appreciate aright the rest of the volume, it is to these chapters (which comprise nearly half the volume) that our attention should be at first directed, and from a perusal of these we gather that the author accepts and bases his new interpretation of the glaucomatous condition upon what is known tersely as the "obstructed-excretion theory." He thus accepts in its fullest interpretation that increased globe-tension and all its disastrous sequelæ result from obstruction existing in the channel by which fluid escapes normally from the eye. He regards the channels of filtration at the iritic angle (or the space of Fontana), discovered by Leber some years ago, to be the exclusive path by which all fluid excess, from the vitreous as well as from the aqueous chamber, escapes. The character of the obstruction in this region in glaucoma is explained, however, differently by the author. Rejecting the explanation advanced by Max Knies as to its inflammatory nature, and the ciliary engorgement of Weber, he has tried to demonstrate, by a series of experiments in which the vitreous and aqueous chambers were subjected to different degrees of fluid pressure (aniline purple being employed in many of the experiments to trace the path of the fluid through the filtration channel), that the obstruction is caused by the advancement of the lens, suspensory ligament, and iris towards, even to contact with, the cornea, as a result of any excess of vitreous pressure over aqueous. Whenever the latter condition existed, it invariably sufficed to close the channel by which the aqueous escaped, by advancing the iris to the cornea and obliterating the iritic angle. For the establishment of excess of pressure in the vitreous chamber, and the induction of all the secondary changes, some interference with the normal passage of fluid from vitreous to aqueous through the suspensory ligament and its escape from the eye at iritic angle must exist, and the author formulates glaucoma as an expression of this condition of obstruction.

The succeeding section is occupied by the application of these facts to the explanation of acute and chronic glaucoma, and as establishing a cause for the excess of vitreous over aqueous pressure in primary glaucoma. This the author finds in a diminution of the distance between the margin of the lens and ciliary processes, and designated the "circumlental space." In producing this narrowing two factors are concerned—primarily an increased diameter of the lens, and secondarily, and as a result of the former from vascular disturbance, an engorgement of the ciliary processes. When these two structures are sufficiently approximated to prevent the normal passage of fluid from vitreous to aqueous, the pressure in the former rises, the lens advances, the iritic angle is obstructed, and glaucoma ensues.

This enlargement of the lens is regarded as an exaggerated condition of a natural senile change, by which it is gradually flattened and its diameter increased.

Such is the explanation given of the causation of primary glaucoma; and it is based on an assumption which, although other facts may lend countenance to it, must necessarily carry with it but slight conviction until it rests on more established demonstration.

The whole theory depends on the maintenance of the obstruction theory: the closure of the iritic angle by approximation or adhesion of the iris to the cornea. This, however, is by no means unequivocally demonstrated even by microscopical investigation; and even before operation rare cases occur in which, where a deep anterior chamber exists with increased tension and without the occurrence of iritic inflammation, the iris, by ocular inspection, is widely separated from the cornea. Such a theory naturally involves a discussion of the principles of treatment by iridectomy; but beyond an explanation of its frequent inefficacy in chronic glaucoma, owing to the inability to remove the primary factor in the obstruction (the increased lens and diminished circumlental space), no new improvement in the treatment of these unsatisfactory cases is suggested.

A chapter is introduced dealing with the subject and principles of tonometry, the conclusions arrived at being incomplete, owing to the difficulty of attaining strict accuracy in the expression of the internal fluid pressure of the globe. Most of the author's tonometrical observations were taken by a new tonometer described in this chapter, the principle adopted being that of a constant pressure and a varying depth of impression—a method possessing the drawback that the delicacy of the instrument diminishes with the increasing hardness of the globe.

In addition to the six sections composing the essay an appendix is added, including the details of the numerous cases referred to, and a number of well-executed microscopical and other drawings having reference to the facts alluded to in the essay. The entire work exhibits much care and labour bestowed upon many of the doubtful points in the pathology of glaucoma. The arguments are clear, if not convincing, and the style perspicuous, rendering a perusal and a ready understanding of the book free from difficulty.

Outlines of Medical Treatment. Intended as a Companion to the "Student's Guide to Medical Diagnosis." By Samuel Fenwick, M.D., Fellow of the Royal College of Physicians, Physician to, and late Lecturer on the Principles and Practice of Medicine at, the London Hospital. London: J. and A. Churchill, New Burlington-street. 1879. Pp. 375.

Dr. Fenwick's "Student's Guide to Medical Diagnosis" has become such a general favourite with students—it has already reached a fourth edition—that any new work by him is sure to meet with a warm welcome. Dr. Fenwick himself tells us, in the preface to the work now before us, the origin of the book. "When recently occupying," he says, "the Chair of Medicine at the London Hospital Medical College, it was my custom to devote the last few lectures of each session to a short outline of the medical treatment of the various diseases which had been described during the course. I found that by so doing I was the better enabled to aid the thoughtful student in preparing for his examinations, and also that the plan served to call to the minds of the class what had been taught them in the wards of the hospital and in the out-patient clinique." And it having been suggested to Dr. Fenwick that the publication of these lectures in a separate form might prove useful, he had put together the notes from which they were delivered. We rather doubt, however, whether these Outlines will prove as useful and acceptable as a separate work, as they did when given as lectures supplementing the general course on the Principles and Practice of Medicine. We do not much admire or believe in separate works on the treatment of disease; but hold that this is much better taught in connexion with etiology, pathology, and diagnosis. In the dedication of his book Dr. Fenwick states that it is intended to remedy a defect in our medical education, viz.—"The tendency to adopt physical diagnosis as the basis for

treatment, to the disparagement of those indications furnished by symptoms, which are of so much importance in leading to a correct method of rational treatment." We believe that this defect does exist to some extent, and needs correction; but, on the other hand, in teaching the treatment of symptoms apart from etiology, pathology, prognosis, etc., is there not the danger that the student will forget that medicine is a science, and not only an art? Having said thus much, however, we must admit that Dr. Fenwick's work is a very good one of its kind. In his first chapter he gives some good and judicious directions on the treatment of disease generally. He warns students against believing generally that they have only to diagnose a disease, and then a medicine to cure it may easily be found; and against thinking that the treatment of a complaint consists solely in the administration of drugs. He well points out the dangers of taking too narrow a view of disease and of neglecting to make allowance for the variations arising from different conditions; and he has had the courage to illustrate these errors by relating mistakes made by himself in his early days of practice. He very usefully also dwells on the necessity of remembering that most medicines require time to enable them to act upon the system, and cautions the young practitioner not to be in a hurry to change his line of treatment. This he illustrates by so good a story that we regret its length forbids our transferring it bodily to our columns. The methods of treatment recommended by Dr. Fenwick appear to us to be generally judicious, and we are glad to see that the formulæ he gives for medicines are, as a rule, very simple. He wisely advises students to practise prescription-writing. It is an art the acquirement of which is nowadays grievously neglected.

GENERAL CORRESPONDENCE.

DISTINCTION BETWEEN TYPHUS AND TYPHOID FEVERS.

Letter from Dr. A. P. Stewart.

[To the Editor of the Medical Times and Gazette.]

Sir,—Dr. Charteris has at length brought forward some documentary proof of Dr. Perry's having changed his mind a second time. In 1835, before examining the fever patients along with Dr. Peebles, he stoutly denied the existence of the rubeoloid rash in typhus; and now he is shown, on my own authority, to have at some subsequent time recognised the typhoid rash, which in 1836 he ignored. On reading Dr. Charteris's letter, I at once referred to Aitken's work, which I had not previously thought of consulting, and found myself quoted, within inverted commas, as stating that "Dr. Perry was the first to maintain the complete difference of the two eruptions." To ascertain whether these were indeed my words, I had recourse to vol. liv. of the *Edinburgh Medical and Surgical Journal* for my paper, of which I have not for many years possessed a copy, and found there a very different story:—"Dr. Perry, of Glasgow, was the first *whom I heard* maintain the complete difference of the two eruptions." How long after the publication of his statement and propositions in 1836 this avowal was made, there is nothing to show. Whether it was his own idea, or one suggested to him, as was the existence of typhus eruption by Dr. Peebles, I cannot say. All that this statement proves is the accuracy of his son's original assertion, that he had changed his views after his publications in 1836. But I have not had occasion to change my views since I first had the opportunity of comparing the two diseases in 1836. The fact of their being distinct specific fevers was forced upon me, as I wrote in 1840 (*Edinburgh Medical and Surgical Journal*, vol. liv., page 291), by "characters so marked as to defy misconception." I therefore make Dr. Charteris welcome to the only piece of real—not hearsay—evidence that has been adduced in support of Dr. Perry's newer views, as opposed to his "new views" embodied in his letter of January, 1836. But coming, as this evidence does, from one so wholly given up to self-delusion and self-worship as Dr. Charteris plainly considers the author of it to be, it surely cannot, even as a statement of fact, possess much value in his eyes.

I am, &c.,

Grosvenor-street, W., January 12. A. P. Stewart.

THE COLLEGE EXAMINATIONS.

[To the Editor of the Medical Times and Gazette.]

Sir,—As you were the first to bring under public notice certain rather important defects in the system of examinations pursued at the Royal College of Surgeons, you may not be unwilling to become the medium of an expression of approval of the great improvement visible in the last paper set before the candidates at the College Primary Examinations. As you have already published these papers both on Anatomy and Physiology, it will suffice for me to say that, in the opinion of all the teachers whom I have seen and consulted, the questions are eminently fair and workmanlike. If the *vivâ voce* examinations are only conducted in the same fashion and spirit, both teachers and students will have just reason to be satisfied—pluck or pass. I am, &c., Teacher.

DR. LANDOLT'S "MANUAL OF EXAMINATIONS OF THE EYES."

Letter from Dr. Landolt.

To the Editor of the Medical Times and Gazette.

Sir,—Will you do me the favour of inserting these few lines in your much-esteemed journal? I am sorry to find that the translation of my "Manual of Examinations of the Eyes," by Dr. Burnett, contains some errors that I cannot allow to pass uncorrected, both for my readers' sake and for my own. I have therefore had an appendix printed, and have sent it to the editor, Dr. Brinton, who will be kind enough to deliver a copy to any former purchaser of my work who may desire one, and also to add it to as many of my books as he still has in his possession. Allow me also to add that a lecture on ophthalmoscopic enlargement, of which the manuscript arrived in Philadelphia too late for publication, has just appeared in the first number for 1880 of the *British Medical Journal*. I beg, therefore, those of my colleagues who have my work to apply for this lecture, as well as for the appendix, either to Dr. Brinton, Medical Publication Office, 115, South Seventh-street, Philadelphia, or to me, at 8, Rue de la Bienfaisance, Paris.

Paris, January 11. I am, &c., Dr. Landolt.

Meath Hospital and County Dublin Infirmary.—A pleasing ceremony took place on New Year's morning at ten o'clock, in the lecture theatre of the above-named Hospital, the occasion being the presentation from the Medical Board of a gold watch to William E. Crozier, Esq., L.R.C.S.I. House-Surgeon and Resident Medical Officer to the institution. The watch, being a massive gold keyless timekeeper, bore on its cover the following inscription:—"Presented to William E. Crozier, Esq., L.R.C.S.I., by the Medical Board of the Meath Hospital, as a slight token of their esteem and regard. January 1st, 1880." The presentation was made by Mr. Porter, Senior Surgeon to the Hospital, in the name of himself and his colleagues. Mr. Crozier made a suitable reply, and the proceedings terminated.

Statistics of Hernia.—We gather the following facts from the sixteenth annual report of the New York Society for the Relief of the Ruptured and Crippled. The number of ruptured patients treated during the sixteen years was 23,859. Of these 19,151 were males and 4707 females, or 80 and 20 per cent.—the general percentage of all cases being 62 and 58. The higher proportion of ruptured amongst males is therefore conspicuous. The statistics of the year under report distinguish the several varieties of rupture. Of 3871 cases, 2397 were inguinal, 263 femoral, 184 umbilical, and 27 ventral. Of the 2397 inguinal, 2212 were males and 185 females; 1610 right and 787 left; 2235 oblique and 162 direct. Of the 203 femoral, 34 were males and 229 females; 148 right and 115 left. Of the 184 umbilical, 63 were males and 121 females. Of the 27 ventral, 11 were males and 16 females. Of the whole number 809 were under fourteen years of age—viz., 685 inguinal, 17 femoral, 102 umbilical, and 5 ventral; 145 between fourteen and twenty-one years—viz., 13 inguinal, 11 femoral, and 3 umbilical; and 1917 over twenty-one—viz., 1581 inguinal, 235 femoral, 79 umbilical, and 22 ventral.—*Indian Med. Gaz.*, December.

REPORTS OF SOCIETIES.

THE PATHOLOGICAL SOCIETY.

TUESDAY, JANUARY 6.

JONATHAN HUTCHINSON, F.R.C.S., President, in the Chair.

A LARGE GALL-STONE PASSED PER ANUM; WITH REMARKS ON THE STRUCTURE OF CHOLESTERIN BILIARY CALCULI.

DR. W. M. ORD exhibited a large gall-stone sent to him by Dr. Carr H. Roberts. It had been passed per anum by a lady shortly after her confinement, the only two associated symptoms having been excessive pain in the back, and constant diarrhœa, with pale yellow motions—jaundice being absent. Some mechanical aid was needed for the extrusion of the stone, which measured one inch and five-eighths by one inch and one-eighth, and weighed five drachms. It was of a brown colour, and near one pole had sustained some superficial damage. It was certainly not an enterolith, but a true gall-stone, composed of cholesterin mixed with biliary pigment; whereas enteroliths consist either of concreted indigestible matters, or of hair, or of triple phosphate, or lime salts, or ellagic acid, or lithofellinic acid, and never of cholesterin. The examination of this specimen led to remarks on the structure of cholesterin calculi. These, the speaker said, consist chiefly of a mixture of cholesterin with biliary pigment. There may be present, in addition, small quantities of mucus, of lime salts, of the biliary acids, or of carbonate of lime. In section they show, as is well known, a composite structure. The central portion is deeply coloured and consists mainly of bile-pigment; around this a portion only slightly coloured is composed of crystalline matter with a very marked radiating arrangement of the crystalline axes; outside this is a zone showing concentric laminæ of different shades of colour; finally, the outer part of the calculus is deeply coloured and not obviously differentiated in structure. On microscopic examination of the layers, from without inwards, it is found that the outer layer, the last deposited, is composed of an intimate mixture of cholesterin with biliary pigment. The cholesterin is not in tabular crystals, but is either in masses without form or in spheres, or in undulating crystalline fibres, stained with pigment. In the zone of concentric laminæ the undulating fibres are found with a radial arrangement. In each successive deeper lamina the fires become more distinct, more crystalline, and less coloured, the colour gathering into the interstices instead of staining the crystals. By numerous gradations this structure passes, towards the centre, into one of radiating columnar masses of perfectly colourless cholesterin, with pigment packed between. The centre is composed almost entirely of pigment; but what cholesterin is mixed with it is in rhomboidal or rhombohedral forms. The pigment here is continuous with the interstitial pigment of the radiating layer, and is not a nucleus around which quite fresh matter has been gathered. It is evident that the outer layer of these calculi is the last to be formed; and that this contains, instead of crystals, a mixture of formless crystalline material with formless pigment. The central part again is the oldest or first formed, and consists of separate masses of crystals and of pigment. It is evident, therefore, that a metamorphic change takes place in the calculus subsequent to its formation. The changes are due, it is suggested, to the fact that the cholesterin is first deposited along with the biliary pigment, a colloid of high molecule, by which it is prevented from assuming its proper crystalline form; and it therefore takes a spherical or finely divided form. But the colloidal pigment has itself a tendency to become crystalline after some time, and so a gradual separation of the two takes place, most advanced in the oldest part of the calculus. In relation to this explanation, the proportion of the outer layers is found to be largest where the colouring matter predominates, that of the crystalline centre when the cholesterin predominates. In support of the hypothesis, the speaker cited certain experiments, some of which have been lately recorded by him in the *Proceedings of the Royal Society*, showing that cholesterin deposited in albumen or gelatin is at first spherical in its forms and gradually changes the spherical for the needle or quasi-crystalline form; and showing also that mixtures of bile-pigment and cholesterin, held in solution by hot acetic acid, form homogeneous spheres, which during cooling break up into smaller crystalline spheres with separation of brilliant masses of pigment; then again in to masses of needle-like crystals; and that these crystals after a day or two arrange themselves in a mixed laminar and crystalline structure around the centre of each sphere.

RENAL CALCULUS OF UNUSUAL STRUCTURE.

Dr. ORD also exhibited a large calculus which had been removed, post-mortem, from the right kidney of a patient who had died in St. Thomas's Hospital of malignant disease of the bowels. It completely filled the pelvis of the kidney, from which it had to be cut out, but yet had produced no thickening or sign of inflammation, and had not given rise during life to any symptoms of renal colic or pyelitis. When removed it was black and tuberculated, so as to resemble at first sight a mulberry calculus, but was moist and softish on the surface. It was much lighter than oxalate of lime calculi are. After becoming dry, it was cut in two, and was found to consist of a greatly wrinkled, fragile, black shell, with a hard kernel of a dark grey colour, lying loose, but certainly, before the calculus was dried, in contact with the shell. The kernel was concentrically laminated, it had no separate nucleus, but the circumferential laminæ were imperfect, portions of the surface having been eroded. Between the kernel and shell there was a loose layer containing large and almost colourless crystals of uric acid, mixed with brown pigment and colloidal material. The crust was composed of a colloid allied to chitin, deeply tinted with a brown pigment which was not blood nor common urinary pigment. The nucleus was a mixture of uric acid with the same pigment, the uric acid being not in separate crystals, but in crystalline fibres perpendicular to the laminæ. Dr. Ord suggested that the original firm calculus had been coated with mucus and epithelium, by which, in harmony with Mr. Rainey's law of "molecular disintegration," the surface below had been eroded, the molecules of uric acid undergoing re-arrangement into large colourless crystals, and the pigment being separated into masses. In ordinary cases the presence of a calculus sets up irritation in the adjoining surfaces. In the present case there was no sign of irritation, but the coats of the pelvis invested the calculus with extraordinary closeness; so that the ordinary secretions had concreted on the calculus and produced the very unusual results described.

Mr. HULKE thought that Dr. Ord had hardly shown that there was a complete parallelism between the molecular disintegration illustrated by the action of carbonate of lime on glass and the change supposed to have taken place in the calculus just described.

Dr. ORD replied that what was done by carbonate of lime on glass was only a good example of what may be done by any colloid on glass. In the case of the calculus, moreover, the pigment was a very active agent in the production of changes. Another important point was the fact that, according to the variations in the density of a solution in which a calculus is deposited, the structure of the calculus was modified. Thus, dissolved in gum, they show on deposition—first, a laminated arrangement, then traces of a radial arrangement. As the solution becomes denser by evaporation, the calculi undergo peculiar erosions on the surface, and finally are disintegrated, falling to pieces from the circumference to the centre in proper crystals.

LARGE CYSTIN CALCULUS.

Dr. ORD also exhibited a large cystin calculus sent to him by Mr. Reginald Harrison, of Liverpool, which had been successfully removed by that gentleman, by lithotomy, from a man aged twenty-one. The stone weighed 1050 grains, and is therefore one of the largest, if not the largest, on record. The urine in this case was found, on examination, not to contain cystin.

ORIENTAL BEZOAR.

Dr. ORD next exhibited a concretion which had been presented to the Museum of St. Thomas's Hospital as a biliary calculus. It was of an elongated oval form, with a slight constriction round the middle. Its surface was brown and shining. Its section was of a dark slate colour, and concentrically laminated. It was composed of ellagic acid—a derivative of gallic acid by oxidation—and in this and the other characters agreed so completely with the description

given by Mr. Thomas Taylor of oriental bezoars as to leave no doubt of its real nature. These oriental bezoars are concretions formed in the intestines of ruminant animals, consisting of matters derived from the undigested food.

Cystic Kidney removed by Operation.

Dr. Day exhibited this specimen, which had been removed by Mr. Knowsley Thornton from the left side of a girl aged seven years. The patient presented a large, irregular abdominal tumour, the nature of which was doubtful. A swelling had been observed since the girl was two years of age, but she had not suffered from pain or discomfort. Her urine had been rather scanty, but contained no albumen. Last November an exploratory puncture was made into a part of the tumour between the umbilicus and pubes, where fluctuation was felt. Urinous fluid, which contained albumen, was drawn off to the amount of six pints and a half. The cyst rapidly refilled, and on January 3 it was removed by Mr. Thornton, and found to be connected with the left kidney. The ureter was impervious, so that there was danger of the distended cyst bursting. Since the operation the patient had gone on remarkably well.

Dr. W. Ewart, who exhibited by card a specimen of Cystic Degeneration of the Left Kidney, resulting from obstruction of the ureter, said that in his case the obstruction was caused by a valvular fold of the mucous membrane of the ureter. A probe could be passed up, but not down, the ureter.

Elephantiasis of the Penis.

The President exhibited a drawing showing very great enlargement of the prepuce and skin of the penis in a patient from whom the diseased tissue had been removed. The scrotum was entirely unaffected by the elephantiasis. The patient was a native of the West Indies, and the diseased condition had been observed for at least six years. Filariæ were found in the patient's blood.

Syphilitic Disease of the Long Bones of a Fœtus.

Mr. F. Eve exhibited the bones, with several microscopic preparations, taken from a fœtus that had been aborted at the fifth or sixth month. The mother was, at the time of the abortion, a patient in St. Bartholomew's Hospital, suffering from an annular stricture of the rectum, two inches and a half from the anus. Her rectal trouble began three years previously with the frequent discharge of bloody slime in her motions. The abortion took place before the treatment of the stricture had been begun. The evidence of syphilis was made to rest on all the circumstances taken together, rather than on the history of the mother, which was defective—the rectal stricture, the abortion, and the condition of the fœtal bones being the main grounds for the diagnosis of syphilis. Only the long bones of the fœtus were found diseased; but all these, except the left tibia and fibula, presented at the extremities of the diaphysis the condition called by Parrot the gelatiniform degeneration. Except at the upper extremity of the humeri, radii, and left fibula, and at the lower extremity of the radii and ulnæ, the epiphyses were separated from the diaphyses; but even where the epiphyses were not actually separated, the ends of the diaphyses were found on section to be softened and infiltrated with yellowish granular material. Thickened periosteum kept the separated epiphyses attached to the diaphyses. The extremity of the diaphyses was covered by a dirty-looking grumous detritus, and the surrounding periosteum was discoloured. In some instances the periosteum was separated from the shaft as high as one-eighth of an inch from the extremity, the denuded bone being softened and ragged, as if carious. The left tibia and fibula showed the osteoid change of M. Parrot. Their periosteum was very easily stripped off, and both bones were greatly and irregularly thickened, the greatest thickening being at the middle of the shafts, there being a large nodular projection at that part of the tibia. Both bones were very chalky and brittle. A thin layer of osteoid deposit was also seen on the posterior surface of the lower part of the right humerus. The microscopic appearances presented by the affected bones in this case, which agreed in the main with those described by M. Parrot in his original paper in the *Archives de Physiologie*, were the following:—At those extremities where the epiphyses had not actually separated, the epiphysial cartilage seemed normal, as well as the adjoining layer of intermediary cartilage. The zone of calcified cartilage appeared thicker than normal, and the narrow spaces between its vertical calcified laminæ were quite full of granular matter. In the adjoining layer of spongy bone the lamellæ were thin and scanty, and were separated by much granular material, in which breaking-down marrow cells, filled with granules, and containing also in some cases fatty particles, were with difficulty recognised. The bony lamellæ in this region appeared to have undergone rapid absorption; their margins, extremities, and surfaces presented an exceedingly large number of Howship's lacunæ, containing osteoblasts mostly granular and breaking down. The periosteum generally was thickened, the fibrous layer considerably, and the osteogenetic layer greatly, and beneath the latter was a layer of spongioid tissue (Parrot). The thickening of the periosteum was greatest opposite the junction of the intermediary cartilage with the extremity of the diaphysis. The speaker remarked that the two discoverers of these changes in the bones due to hereditary syphilis differed in their explanation of the nature of the morbid process. While M. Parrot considers the disease of the extremities of the diaphyses to be a gelatiniform degeneration due to faulty nutrition, Dr. G. Wegner designates it an osteo-chondritis. Mr. Eve suggested that the morbid process was a hyperplasia of the elements, out of which the osseous tissue is formed, just as gummata of the viscera are the result of local hyperplasia of the connective tissue. The result of the morbid process was different in different situations. At the extremity of the diaphysis there was a marked tendency to degeneration on the surface of the shaft to organisation—a difference probably due to the different form of ossification in the two regions. At the extremities of the diaphyses ossification takes place by the formation of endochondral bone. The blood-supply here is not so abundant as beneath the periosteum; consequently the crowded and rapidly formed marrow cells are badly nourished and undergo granular and fatty degeneration. Coincidently the trabeculæ of bone already formed appeared to undergo rapid absorption; hence the connexion between the diaphysis and the cartilage becomes more and more weakened, and separation ultimately results. The remains of the spongy bone and broken-down marrow crumble away, and suppuration seems to occur occasionally, though M. Parrot says this result is always secondary and due to accidental causes. Beneath the periosteum, on the other hand, the blood-supply is more abundant, and intra-membranous ossification can go on as far at least as the formation of a large quantity of the fibrillar matrix of the bone, and thus the spongioid tissue of Parrot is produced. In the majority of cases ossification of this spongioid tissue takes place, and thus external thickening of the bone results; but in some cases it remains unossified. The so-called chondro-calcareous change seems to be another link in the chain of morbid processes, being probably due to the continued formation of calcified cartilage, while the young marrow cells are incapable of covering its surface with bone. Such an explanation of the different modifications in the diseased conditions, the speaker thought, would at least assist in freeing this affection from the mystery in which it had been enshrouded by the fact that quite different names had been given to its different appearances.

Dr. Hoggan thought that some of the microscopic preparations exhibited by Mr. Eve as illustrative of pathological processes were really excellent examples of typical normal ossification of embryonic cartilage.

Mr. Cripps thought that there was not sufficient evidence that the mother had had syphilis at all. He hardly thought the existence of stricture of the rectum was sufficient proof. Had the mother had sore throat? Had she any living children, and were they syphilitic?

Mr. Eve, in reply to Dr. Graily Hewitt, said the placenta had not been examined. He based his belief that the woman was syphilitic on the existence of the rectal stricture, on the fact that abortion had taken place, and on the condition of the bones of the fœtus. As to Dr. Hoggan's criticism, the specimen referred to showed only slight pathological changes. Dr. Klein had been kind enough to look over his specimens, and had agreed with his (Mr. Eve's) description of them.

The President thought that the existence of rectal stricture in this case was a strong presumption in favour of syphilis. He would suggest, however, that an effort be made to get more definite details regarding the history of the mother. He also suggested that the specimens be referred to a committee (Dr. Barlow and Mr. Butlin) for further examination.

Mr. Eve also exhibited two adult skulls with distinct natiform swellings (congenital syphilis).

The Society then took up the business of the annual meeting. This portion of the proceedings we reported last week (page 40).

EPIDEMIOLOGICAL SOCIETY.

Wednesday, January 7.

Sir Joseph Fayrer, K.C.S.I., M.D., F.R.S., President, in the Chair.

Notes on the Relapsing Fever of India.

Dr. Norman Chevers read a paper on this subject. He said that relapsing fever having been recognised in Europe in 1842, was first distinctly observed and described in India by Dr. Robert Lyell in 1852-53. Our knowledge of the disease, however, enables us to perceive that very extensive and destructive epidemics of Indian relapsing fever occurred in the North-Western Provinces in 1816 and 1836. In giving histories of these epidemics the author remarked that it is particularly noteworthy that the first visitation of Pali plague prevailed in Western India from 1815 to 1819, and that the outbreak of relapsing fever in 1816, described by Mr Jameson, occurred in the Upper Provinces only a few months previous to the commencement in Lower Bengal of the great cholera epidemic of 1817. So, also, when, in 1836, the Pali plague, commencing in Marwar, spread rapidly and attacked thirty-two villages of Megwar, a destructive epidemic, which must have been relapsing fever, made its first appearance in the town of Bareilly, and committed serious ravages in Mynpoorie and in the districts round Delhi. The history of the outbreak of relapsing fever in 1852-53 in the Yusufzie Valley, situated about forty miles from Peshawur, was then given from Dr. Lyell's narrative. In this epidemic were displayed all the most destructive characteristics of the relapsing fever in India, which, unlike the cognate disease of Europe, is very destructive of life—an extremely prevalent and fatal epidemic or endemic fever arising among the poor and starved, and spreading to the well-to-do inhabitants by the force of its contagiousness. The tendency to relapse is very marked; convalescence is tardy; there is generally jaundice, and quinine has no specific power as an antidote to the fever poison. Dr. Joseph Ewart, who was the first person who recognised the existence of true enteric fever in India, in 1855, noticed what he considered to be some cases of relapsing fever in Upper India at about the same time. Several years, however, had still to elapse before the occurrence of relapsing fever in the gaols of Upper India was generally suspected. A very destructive contagious fever appeared in the Central Gaol at Agra in 1860, and was described by Dr. Walker. It again prevailed in a very deadly form in the Agra Gaol in 1864, and in that and the following year it appeared in the gaols of Umballah, Futteeghur, Allyghur, Jypore, Malwa, etc. It was described by the several reporters as true typhus, contagious fever, typhoid fever, and, in the words of the Sanitary Report, "some again believe it to be identical with the relapsing fever of Europe." Dr. Gray, Dr. Beatson, and Dr. Dallas clearly recognised this disease, as it occurred at Agra, Lahore, and Umballa, as relapsing fever. The whole question was most fully and ably reviewed by Dr. David Boyes Smith in the *Indian Medical Gazette* for 1867 and 1868; and although his verdict met with a good deal of opposition (especially from the medical side of the Indian Sanitary Commission), he brought forward very strong arguments in favour of the opinion that the contagious fever of the up-country gaols was nearly identical with the relapsing fever of Ireland, Scotland, Germany, and America. Indeed, the Sanitary Commission went so far as to admit that the disease resembles the famine fever of Europe in many important particulars. The history of the outbreak of relapsing fever, which commenced in Bombay in April, 1877, was then given from the reports of Drs. Hunter and H. Vandyke Carter, and many facts were brought forward in support of the argument that, although relapsing fever has not appeared in Lower Bengal of late years, that country was subject to the ravages up to and beyond the end of the last century.

On Epidemic Diseases (Men and Animals) in the Colony of Natal.

Surgeon-General Ross read this paper. After describing the geographical position of the colony of Natal, the author pointed out that the inhabitants of the colony at the close of 1878 are believed to have numbered 22,654 whites and 302,858 natives, 12,000 being natives of India. The area in square miles is stated to be 21,150, giving 1·07 whites and 14·7 blacks to the square mile. With so recent a history of colonisation (between twenty and thirty years), and with such a sparse population, no occurrence of epidemics would be anticipated. The climate of the colony has proved exceedingly healthy for men, women, and children; it is therefore an anomaly that, with such a healthy climate for whites and blacks, the country should be so unhealthy, and so subject to disease and epidemics among animals. Cholera has never been known. There occurred only once a few cases of small-pox on the Zulu border of the colony. During 1878 there was a small outbreak of typhoid among the residents of Durban, due to defective conservancy arrangements and imperfect water-supply, and a few scattered cases occurred during the first half of 1879. Typhoid fever was the principal, if not the only, disease which affected the troops during the recent campaign in Zululand. The disease which affected the troops shut up in Ekowe, the Medical Department classifies as typho-malarial, being a fever of malarial type with rose spots and well-marked lesions of Peyer's glands. There are probably two forms of typhoid fever—the one which might be called European, arising solely from sewage contamination; the other or more Eastern type, prevalent, perhaps, in certain latitudes, where there is the same type of fever more due to climatic than to filth causes. Horses and mules are affected by horse-sickness, which is described as "anthrax fever," resulting from the action of a poisonous agent ingested in the food, impairing vitality, and inducing a morbid state of the system, with congestive inflammation of the lungs, and often external tumours. It is believed to be identical with the Loodianah disease of India, and to be due to some poison in the grass of certain lands, probable parasitic fungi. Horses are also liable to a form of diarrhœa, popularly known as "squitters." The diseases of oxen are lung-sickness, red-water, and quarter-evil. The first of these is identical with pleuro-pneumonia, it occurs all over the colony, is worse in some parts than others, and is not affected by climate. Red-water or hæmo-albuminuria is a blood affection, attended with more or less derangement of kidney, liver, and stomach. It lasts for five or six days, and is most fatal and prevalent after the rains of early summer. It is supposed to be due (1) to feeding on grass containing an excess of water; (2) to feeding on grass containing parasites or fungi; (3) to bad drinking-water. Quarter-evil is a species of malignant anthrax affecting the legs and trunk. Sheep suffer from heart-water, a disease in which there is fever and effusion into the serous cavities, and said to be caused by bad pasture, dry rearing, etc. More recently internal parasites have been discovered. Scab formerly caused great destruction of flocks, but preventive measures were adopted by law with very good results. Poultry, of which the colonists are very great breeders, are liable to a disease known as fowl-sickness, which sometimes empties a poultry-yard in forty-eight hours.

In the discussion which followed the reading of the two papers, Sir Joseph Fayrer, Surgeon-General Ewart, Inspector-General Lawson, Dr. Buchanan, Dr. Greenfield, Mr. Netten Radcliffe, and Dr. Thorne Thorne took part.

CLINICAL SOCIETY OF LONDON.

Friday, January 9.

E. H. Greenhow, M.D., F.R.S., President, in the Chair.

Report of the Committee on Chloral.

Dr. Farquharson first proceeded to read the report of the Committee on the Abuse of Chloral, given elsewhere in our columns.

Dr. Bristowe remarked on the total absence of any views on the part of the Committee, and of some of its most distinguished members, as Sir William Gull, Sir William Jenner, and Dr. Andrew Clark.

Dr. Hewan said he had observed a case where erythema occurred with doses of twenty grains every night. The erythema recurred when the drug was again administered.

Dr. F. Tayler mentioned the case of a gentleman, aged over eighty, who took twenty-five or more grains every night for four or five years without bad effect. This was for

the pain and trouble of cystitis. When chloral was first introduced he had noted a kind of nocturnal delirium as not uncommon; this may have been due to impurities in the drug. He thought the age of the patient was an important factor.

Dr. Farquharson, in reply to the President, said the whole correspondence would be rather too bulky for publication, but it could be done. Sir W. Jenner had no special observations to offer, and Dr. Andrew Clark had promised notes of some half-dozen cases. Many members of the Committee, among others Sir W. Jenner, were very averse from drawing any conclusions from the facts contained in the report.

(*To be continued.*)

NEW INVENTIONS AND IMPROVEMENTS.

THE BILIN MINERAL WATER.

From Mr. L. Epstein, 27, King-street, Cheapside, we have received some of the Bilin water, which, though long known, we believe, and largely used in Germany, has only lately been introduced into England. The water is bright, refreshing, and very pleasant to the taste; and closely resembles, in composition and character, the popular Vichy waters. It is rich in bicarbonate of soda (containing, according to Dr. Hassall and Mr. Hehner, as much as 333·8 parts of that salt per 100,000 of the water), in sulphate of soda, and in free carbonic acid gas. Bilin water mixes well and pleasantly with light wines, makes an agreeable addition to our table or dietetic waters, and will, no doubt, be found useful in gout, and in the treatment of acidity in the stomach, and similar disordered conditions.

We have received also some Bilin Digestive Pastilles, which are prepared from the water by evaporation. They consist of all the saline substances contained in the water, made up with sugar into pastilles, possess of course the general remedial properties of the water itself, and form a convenient and handy method of taking its alkaline constituents.

AËRATED WATERS: HARROGATE WATERS.

The Chemists' Aërated and Mineral Waters Association have submitted to our examination samples of various aërated waters—soda, potash, lithia, seidlitz, and others—manufactured by them. All those that we have tested are very good; and they are supplied of specified strength and composition. This latter is a decided advantage, whether the waters are used simply as beverages or as medicinal agents. To supply such waters "of specified formulæ and guaranteed quality" is the first object of the Association; but the second one, of at least equal importance, is to deal in the waters of the various mineral springs in Great Britain; and they propose, as we understand, to begin by supplying bottled waters of the Harrogate Montpellier springs. In order to forward the more extended use of these well-known waters elaborate analyses have been made by Professor Attfield of the "Kissingen" saline chalybeate spring, and of the "Montpellier" strong sulphur, mild sulphur, and new iron springs; all of which analyses are very interesting. His reports of the three older springs confirm, on the whole, the analyses made in 1845, 1854, and 1867, by West, Hoffman, and Muspratt, respectively; but he has brought forward some new and interesting points. He finds that the waters of all the four springs contain strontium in notable quantities, and traces of lithium, of bromides, and iodides; and three of them contain barium. The strontium and barium salts, like all the other compounds, are, in all the waters, in a state of perfect solution. Carbonic acid gas is naturally present to some amount in the sulphur waters; and Professor Attfield asserts, as the result of many experiments, that if charged with an additional dose of the gas as they come from the springs, and immediately bottled, these waters will keep perfectly sound and active for months; and may be transmitted any distance. It is not to be supposed that drinking the Harrogate waters at home will be to the full as beneficial as the going away from home and business worries and habits, and drinking the waters at the springs. But for those who cannot go to Harrogate, the bottled waters will be the next best thing; and at any rate mineral waters bottled at the producing sources will be much better and truer than any artificial imitations.

OBITUARY.

JOSHUA HENRY PORTER, Acting Deputy Surgeon-General A.M.D.

It is with feelings of sincere regret that we record the death of Deputy Surgeon-General J. H. Porter, which took place, from pneumonia, on the 9th inst., at Sherpur, where he was serving as Principal Medical Officer with the division under the command of General Roberts, and had rendered signal service in that capacity, both in the present and the last campaign.

By Deputy Surgeon-General Porter's death the Irish School of Surgery has been deprived of one of its brightest ornaments. He was the eldest son of the late Mr. Joshua Porter, at one time High Sheriff of Dublin, and he was first cousin to Mr. George H. Porter, Surgeon to the Queen, and Senior Surgeon to the Meath Hospital. He commenced his professional studies as apprentice to his uncle, the late Mr. William H. Porter, attending the clinique of the Meath Hospital and the lectures of the School of Surgery, Royal College of Surgeons. In 1852 he became a licentiate of that College, and selected the Army for his future career, his first commission as Assistant-Surgeon bearing date June 15, 1853. In 1854 he served with the 97th Regiment before Sebastopol, and received the Sebastopol Medal, with a clasp; the fifth class of the Medjidie, and the Turkish Medal. In 1857-58 he was actively engaged in charge of the forces employed in suppressing the mutiny in Bengal, and was present at the actions of Nusrutpore, Chanda, Ummerpore, Sultanpore, at the siege and capture of Lucknow, and the storming of the Kaiser Bagh. In 1859 he served in the operations in Bundelcund, and was present at the surprise and night attack at the Kala Nuddy. For these services he received another medal with clasp, and in 1862 received promotion as full Surgeon. During the Franco-German war he served with the British Ambulance Corps, was present at the siege of Paris, and in recognition of his eminent services was honoured with the German steel war medal. Returning to England, he was appointed Assistant Professor of Surgery at the Netley Army Medical School, the duties of which post he filled in a most exemplary manner. But while thus employed he made time to compete for a prize offered by her Majesty the Queen of Prussia and Empress of Germany for the best essay on the "Practical Treatment of the Wounded in War," and in this international competition, with such competent judges as Professor Billroth of Vienna, Baron von Langenbeck of Berlin, and Socin of Basle, he had the high honour and distinction of being the successful essayist. He made many and valuable contributions to the pages of our medical journals, and was in practice a brilliant and successful surgeon and operator.

In his despatch of October 22 last General Roberts recommended his Principal Medical Officer specially to the favourable consideration of his Royal Highness the Commander-in-Chief, so that to the last we find him "doing his duty,"—the highest praise that (as Mr. Porter has been heard to say) in his opinion could be awarded any person. In a letter lately received from one of his valued *confrères*, the following passage occurs, corroborative of the foregoing statement:—"He (Mr. Porter) is a most energetic, hardy, and healthy man, and I must say does not spare himself, any more than he does anyone else."

Some years ago Deputy Surgeon-General Porter married the daughter of Deputy Inspector Rind, of the Indian Medical Service, whom, with two little girls, he leaves after him to deplore his loss.

WILLIAM BUDD, M.D., F.R.S.

We regret to record that Dr. William Budd, who was for many years an eminent physician at Clifton, died at his residence, in Clevedon, on Friday, the 9th inst. Dr. Budd was born, in 1811, at North Tawton, in Devonshire, being the fifth son of his father, who was a surgeon of considerable repute in that district, and had nine sons, seven of whom entered the medical profession. Dr. William Budd was educated privately, and afterwards resided for four years in Paris, studying at the Collége de France and the École de Médecine. He continued his medical studies in London and Edinburgh, and in 1838 took the degree of M.D. of the University of Edinburgh, obtaining a gold medal for his graduat

tion essay on "Rheumatic Fever." He settled in Bristol five or six years afterwards, and was appointed Physician to St. Peter's Hospital. In 1844 he was elected Physician to the Bristol Royal Infirmary, to which institution he was attached for sixteen years, and he was also appointed Lecturer on the Practice of Medicine to the Bristol Medical School. Dr. Budd was a hard and persistent worker, an acute and accurate observer, and a hard thinker; and he contributed considerably to the literature of the profession. In 1841 he contributed the articles on Rheumatism and Gout to Dr. Tweedie's "Library of Medicine." In 1849 he wrote on "Malignant Cholera: its Mode of Propagation, and its Prevention"; in 1863, on "Variola Ovina, Sheep's Small-pox; and the Laws of Contagious Epidemics"; and in 1865, and in 1871 again, on Asiatic Cholera, on the latter occasion with special reference to the epidemic of cholera in Bristol in 1866. To the *Transactions of the Royal Medical and Chirurgical Society* he contributed papers on the "Pathology of the Spinal Cord," on "Diseases which affect Corresponding Parts of the Body in a Symmetrical Manner"; and a paper entitled "Researches on Gout." He wrote on other subjects also, as on Cattle Plague, and on the disease called Pig-Typhoid; but his great work was his able and exhaustive treatise on "Typhoid Fever: its Nature, Mode of Spreading, and Prevention," which was published in 1873, and will perpetuate his fame as an acute observer and logical thinker. So far back as in the year 1839, when he was assisting his father during a severe epidemic of typhoid fever in North Tawton, Dr. Budd arrived at the conviction that the fever was communicated from person to person, and that the specific poison which is the cause of the fever breeds and multiplies in the living body of the infected person, as is the case in small-pox, scarlet fever, and some other diseases; and nowhere else. Continued observation led him to the conclusions that this specific poison is cast off from the intestines; and that the excreta from the intestines may communicate the fever to other persons in two principal ways—either by contaminating the drinking-water, or by infecting the air. These doctrines, and the necessary conclusions from them, as regards the measures for preventing the spread of the fever, Dr. Budd taught for many years in his lectures at the Bristol Medical School, but first put them before the profession in print in a series of papers which appeared in some of our contemporaries from early in 1857 down to 1860. He pointed out that typhoid fever and Asiatic cholera are alike in this—that both diseases through the intestinal discharges infect the ground; and that water contaminated by their specific poisons is the chief agent in spreading the diseases. These opinions regarding typhoid Dr. Budd maintained consistently, and supported and enforced them with equal industry and talent; and he insisted by argument and illustration that it followed from them that the ravages of typhoid fever might be immensely diminished, or even entirely prevented, by proper sanitary measures rigidly carried out—viz., by the *immediate* disinfection of all discharges from the bodies of persons suffering from the disease, of all articles of bed and body linen, and of closets and drains; and by the universal maintenance of good drainage and sewerage, and of a supply of water not exposed to contamination.

In 1870 Dr. Budd was elected a Fellow of the Royal Society. In 1873 he undertook the treatise we have mentioned, which embraces all his observations and conclusions on the nature, mode of spreading, and prevention of typhoid fever, admirably set forth, and maintained with equal clearness and power. But just as the work had passed through the press his health broke down; he was compelled to retire entirely from professional work, and during the rest of his life he lived with his family in retirement at Clevedon.

MEDICAL NEWS.

King and Queen's College of Physicians in Ireland.—At the usual monthly examinations for the licences of the College, held on Monday, Tuesday, Wednesday, and Thursday, January 5, 6, 7, and 8, the following candidates were successful:—

For the licence to practise Medicine—

Parkinson, James Henry. | Young, William Robert Minchin.

For the licence to practise Midwifery—

Parkinson, James Henry.

Since December 12, 1879, the following licentiates have been approved for admission as Members of the College, in accordance with the terms of the Supplemental Charter of December 12, 1878:—

Adam, Edward, Liverpool.
Akerman, W., London, W.
Battersby, C. H., Cannes.
Blenkinsop, W. H., Bournemouth.
Bruce, James, London, W.
Buckly, Daniel Francis, Kilmeadan, co. Waterford.
Burne, J. G., Dublin.
Charlton, W. J., Dublin.
Cullimore, D.H., M.D., Madras Army
Darley, Thos., Bray, co. Wicklow.
Elias, Thomas A., Southport.
Kelly, James E., Dublin.
Kynsey, W. R., Surgeon A.M.D.
Long, Alex., Surgeon-Major A.M.D.
Martin, William J., Dublin.
Montgomery, Alexander N., Dublin.
Nixon, Frederick A., Dublin.
O'Grady, Edward S., Dublin.
Palmer, Joseph Mansergh, Armagh.
Sparrow, Richard Henry, Oldham.
Spencer, John A., Dublin.
Thomas, W. R., Sheffield.
Wheeler, William L., Dublin.

Royal College of Surgeons of England.—The following gentlemen passed their Primary Examination in Anatomy and Physiology at a meeting of the Board of Examiners on the 7th inst., and when eligible will be admitted to the Pass Examination, viz.:—

Brown, Richard, student of the Newcastle School.
Crawshaw, Samuel, of the Manchester School.
Fox, George, of the Leeds School.
Hodson, Francis O., of the Cambridge School.
Hudson, Osborne H., of the Sheffield School.
Mitchell, Henry, of the Manchester School.
Mulroney, Thomas R., of the Bombay School.
Musgrave, Frank E., of the Cambridge School.
O'Maher, William, of the Dublin School.
Voisey, Clement B., of the Manchester School.
Wilson, John H., of the Aberdeen School.
Wolrige, Charles A., of the Bristol School.
Wood, John W. A., of the Manchester School.

Eleven candidates were rejected. The following passed on the 9th inst., viz.:—

Bissill, Austin C., student of St. George's Hospital.
Buckley, Thomas W., of the Manchester School.
Greenhill, Edward F., of University College Hospital.
Groom, William, of the Cambridge School.
Heathcote, Ralph G., of the Manchester School.
Parker, Charles B., of the London Hospital.
Serjeant, George, of University College Hospital.
Squire, Edward H., of the London Hospital.
Stephens, William J., of King's College Hospital.
Toller, Charles W. E., of St. Bartholomew's Hospital.
Webber, Edward S., of St. Bartholomew's Hospital.
Wills, Arthur T., of the Manchester School.

Twelve candidates were rejected. The following passed on the 12th inst., viz.:—

Bluett, James D., student of University College Hospital.
Cree, Herbert E., of the Middlesex Hospital.
Cunnington, Cecil W., of King's College Hospital.
Cuolahan, John H., of Guy's Hospital.
Evans, Tegid A., of Guy's Hospital.
Goddard, Walter H., of St. Mary's Hospital.
Milner, Samuel G., of St. Bartholomew's Hospital.
Moore, York T. G., of St. George's Hospital.
Pedley, Richard D., of St. Thomas's Hospital.
Skelton, Walter B., of Guy's Hospital.
Spencer, Bertram, of the Toronto School.
Stansby, Charles J., of St. Bartholomew's Hospital.
Vincent, Philip, of University College Hospital.
Walker, John W., of University College Hospital.
Walsh, John H. T., of the Westminster Hospital.

Nine candidates were rejected, including one for six months. The following passed on the 13th inst., viz.:—

Bennett, George H., student of St. Bartholomew's Hospital.
Burton, William H., of the Ontario School.
Haycock, Henry E., of St. Bartholomew's Hospital.
Hodges, James, of King's College Hospital.
Howell, James B., of Guy's Hospital.
Jeyes, Theophilus F., of Guy's Hospital.
Jones, Isaiah H., of University College Hospital.
Jones, Richard N., of King's College Hospital.
Lane, James O., of St. George's Hospital.
Morris, Albert, of King's College Hospital.
Morris, William D. J., of Guy's Hospital.
Reynolds, John S., of Charing-cross Hospital.
Stow, Charles L., of King's College Hospital.
Wilkin, Griffith C., of University College Hospital.

Ten candidates were rejected, including one who had an additional three months. The following passed on the 14th inst., viz.:—

Appleton, Harry, student of the Charing-cross Hospital.
Bean, William H., of Charing-cross Hospital.
Cowan, Richard H., of the London Hospital.
Davidson, Hugh M., of King's College Hospital.
Harratt, Henry, of the Middlesex Hospital.
Hoar, Charles D., of University College Hospital.
Hodgson, Robert H., of St. Bartholomew's Hospital.
Mole, Robert B., of the Middlesex Hospital.
Morse, Thomas R., of Charing-cross Hospital.
Richardson, Henry E., of Guy's Hospital.
Veitch, Quinten R., of Guy's Hospital.
Walter, Walter E., of Charing-cross Hospital.

Twelve candidates were rejected, including six who each had an additional three months.

APOTHECARIES' HALL, LONDON.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, January 1:—

Hart, Robert Alfred Hillings, Stonesend House, Southwark.

On January 8:—

Sharpina, Kavasji Cursetji, Gower-place, Euston-square.
Sawelle, Frederick Appleton Chatham-place, Brighton.

The following gentlemen also passed their Primary Professional examination:—

Conolly, Paul Bennett, Charing-cross Hospital.
Cooper, Richard Gilpin, St. Bartholomew's Hospital.
Stevenson, Henry Wickham, St. Bartholomew's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to all new Appointments that take place.

BOND, C. J.—Resident Surgeon to the Bedford General Infirmary.

FORBES, DUNCAN, M.A., M.B., L.R.C.S. Edin.—Assistant Medical Officer to the Parish of Liverpool.

NAVAL AND MILITARY, ETC., APPOINTMENTS.

ADMIRALTY.—Fleet-Surgeon Henry Slade has been placed on the retired list of his rank from the 7th inst.

BIRTHS.

ELLIOT.—On January 12, at Belvedere, the wife of John Elliot, M.R.C.S., of a daughter.

FLEMING.—On January 9, at 155, Bath-street, Glasgow, the wife of William James Fleming, M.B., of a son.

POIGNAND.—On January 10, at 234, Upper-street, N., the wife of Malcolm Poignand, M.D., of a son.

WALKER.—On January 3, at Shrubland House, 17, King Edward-road, Hackney, the wife of William Newman Walker, jun., M.R.C.S., of a daughter.

WATSON.—On January 12, at Tottenham, the wife of W. Tyndale Watson, M.D., of a son.

MARRIAGES.

COLENSO—KERR.—On January 7, at Oxford, Robert John Colenso, M.A., M.B. Oxon., M.R.C.S. Eng., to Emily Anne, second daughter of the late Thomas C. Kerr, Esq., of Hamilton, Ontario, Canada

GAYE—JOHNSON.—On December 15, 1879, at Bangalore, Arthur Charles Gaye, Surgeon-Major A.M.D., to Emily Lillia, only daughter of Colonel W. R. Johnson, superintending engineer, Mysore.

PALMER—FAWCETT.—On January 8, at Weston-super-Mare. Francis Craddock Palmer, L.K.Q.C.P. Ire., M.R.C.S. Eng., L.S.A. Lond., of Brigg, Lincolnshire, to Laura Augusta, eldest daughter of the late Benjamin Fawcett, Esq., of Torfels, Weston-super-Mare.

ROSE—CLAUDET.—On December 31, 1879, at St. James's, Piccadilly, Arthur Veel, second son of Henry Cooper Rose, M.D., of Hampstead, to I. Marion, daughter of Frederick Claudet, Esq., of Oakhill Park, Hampstead.

TIBBITS—TIBBITS.—On January 8, at Abergele, N. Wales, Edward T. Tibbits, M.D. Lond., of Bradford, Yorks, to Elizabeth Sarah, second daughter of the late Charles Tibbits, Esq., of Abergele.

DEATHS.

BANCKS, THOMAS, M.D., F.R.C.S., late of Stourbridge, Worcestershire, at 18, Promenade, Cheltenham, on January 4.

BEATTIE, WILLIAM LOWTHER, third son of Alexander Beattie, M.D., of Colchester-terrace, W., at Bombay, on December 25, 1879.

BUDD, WILLIAM, M.D., F.R.S., at Clevedon, on January 9, aged 68.

FLAHERTY, THOMAS AUSTIN, M.D., F.R.C.S.E., late of 2, Baker-street, Portman-square, at Ardagh, Killarney, on December 18, 1879, in his 57th year.

FOSTER, MICHAEL, F.R.C.S., at Huntingdon, on January 7, aged 69.

HURLSTONE, MICHAEL OSCAR, Staff-Surgeon R.N., at Outram House, Southsea, on January 11, aged 39.

JACKSON, NEVILL, M.D., Superintendent of the Buxar Central Gaol, and Civil Surgeon of Buxar, at Buxar, Bengal, India, on December 7, 1879, aged 50.

JONES, VICTORIA RIDGE, eldest child of Ridge Jones, M.D., of 19, Chapel-street, Belgrave-square, on January 4.

PORTER, JOSHUA HENRY, Officiating Deputy-Surgeon-General, Cabul Field Force, late Assistant-Professor of Military Surgery, Royal Victoria Hospital, Netley, at Sherpur, on January 9.

SAYER, W. ANGELINA, wife of W. Feetham Sayer, Esq., and fourth daughter of Samuel Richards, M.D., of 38, Bedford-square, London, W.C., at 22, Bonchurch-road, North Kensington, on January 12, aged 30.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

KENT COUNTY ASYLUM, BARMING HEATH, NEAR MAIDSTONE.—Senior and Junior Assistant Medical Officer. Candidates must be doubly qualified and registered under the Medical Act. Applications, with testimonials, to be sent to F. Pritchard Davies, M.D., Superintendent, on or before January 20.

BRIGHTON AND HOVE DISPENSARY.—Resident House-Surgeon. Candidates must be members of one of the Royal Colleges of Surgeons of Great Britain or Ireland, and licentiates of the Royal College of Physicians, or of the Society of Apothecaries, London, and registered under the Medical Act. Applications, with testimonials, are to be sent to the Chairman of the Committee of Management, Brighton and Hove Dispensary, Queen's-road, Brighton, on or before Monday, February 2.

LIVERPOOL DISPENSARIES.—Assistant Resident House-Surgeon. Candidates must be unmarried and duly qualified. Applications, with testimonials and registration certificates, to be sent to the Secretary, Leith Offices, 34, Moorfields, Liverpool, on or before January 29.

ST. GILES'S, CAMBERWELL.—Assistant Medical Officer. Candidates must possess the requisite qualification to practise medicine and surgery prescribed in the General Consolidated Order of the Local Government Board, and be registered under the Medical Act of 1858. Applications, stating age and qualifications, to be sent to Mr. Charles S. Stevens, Clerk to the Guardians, on or before January 20.

SUNDERLAND AND BISHOPWEARMOUTH INFIRMARY.—Physician. Candidates must possess the degree of Doctor in Medicine of some University of the United Kingdom, and be registered accordingly, and are not to undertake to practise in surgery or midwifery. Applications, with testimonials, to be sent to the Secretary, John Kitts, Esq., on or before January 28.

ROYAL PORTSMOUTH, PORTSEA, AND GOSPORT HOSPITAL.—House-Surgeon. Candidates must be medical graduates of a University, or members of a College of Surgeons of the United Kingdom, registered, and unmarried. Applications, with testimonials, to be sent to the Chairman of the Committee, The Vicarage, Portsmouth, on or before January 22.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Caistor Union.—Mr. R. Burnham has resigned the Keelby District: area 23,303; population 2952; salary £40 per annum.

Hartlepool Union.—Dr. George Moore has resigned the Workhouse and the Hartlepool District: area 5078; population 15,423; salary £50 per annum. Salary for Workhouse £65 per annum.

APPOINTMENTS.

Basingstoke Union.—Samuel Andrews, L.R.C.P. Lond., M.R.C.S. Eng., to the Second District.

Carlisle Union.—Cornelius S. Hall, M.R.C.S. Eng., L.S.A., to the Harroby Hill Workhouse.

Guisbrough Union.—Friend Edward Strecton, M.R.C.S.E., L.R.C.P. and L.M. Edin., to the Kirkleatham District.

Henley Union.—Christopher Henry Cockram, L.R.C.S. Ire., L.R.C.P. Edin., to the Caversham District.

Holyhead Union.—Hugh P. Jones, M.R.C.S. Eng., L.K. & Q.C.P.I., to the Aberffraw District.

Newbury Union.—Francis Henry Lyon, L.K. & Q.C.P.I., L.R.C.S. and L.M. Ire., to the Third District.

Penrith Union.—Reginald Dudley, M.R.C.S.E., to the Kirkoswald District.

Stone Union.—Wm. J. Dawes, M.R.C.S. Eng., L.S.A., to the Trentham District.

Tamworth Union.—Thomas Kirkwood, M.B. and M.C. Glasg., to the Anstrey District.

Woodbridge Union.—Geo. H. Hetherington, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A., to the Eighth District and the Workhouse.

MANCHESTER MEDICAL SOCIETY.—The annual meeting was held on January 14, when the following office-bearers and Committee were elected for the current year:—*President:* *David Little, M.D. *Vice-Presidents:* Daniel John Leech, M.D., Henry Simpson, M.D., John Thorburn, M.D., *Walter Whitehead. *Treasurer:* *Frederick Ashton Heath. *Secretary:* Charles James Cullingworth. *Honorary Librarian:* Thomas Windsor. *Other Members of Committee:* John Broadbent, *William Crosby, Julius Dreschfeld, M.D., *Charles Edward Glascott, M.D., *Edward Gumpert, M.D., James Hardie, M.D., *William Hugh Hughes (Ashton-under-Lyne), *Henry Humphreys, M.D., Thomas Jones, M.B., *Joseph Chadwick Peatson, M.D., David Lloyd Roberts, M.D., James Ross, M.D. The above, with the past presidents of the Society and two representatives of the Council of the Owens College, form the Committee. *Auditors:* *John Dixon Manu, *William Yeats, M.D. *Librarian:* William Dykes. (The names preceded by an asterisk are those of gentlemen who did not hold the same office during the previous year.) The Secretary announced that there were 208 members on the roll, as compared with 198 last year; and that 1272 volumes had during the past twelve months been added to the library, which now contains 23,895 vols.

TRAUMATIC CAROTID ANEURISM.—A young man received a wound from a pistol-bullet under the right eye, and a large swelling appeared immediately at the angle of the right jaw. When seen two days later the parts had the appearance of mumps. A week later the fever and inflammation had abated, and the patient was moving about, swallowing and speech still continuing difficult. Two weeks after the injury the mouth could be opened sufficiently for inspection, and a translucent, œdematous tumour, the size of a hickory-nut, was seen over the hard palate on the right side. It was hardish and without fluctuation. A free incision

having been made across this, dark clots issued out and were followed by an impetuous gush of arterial blood, the man dying in two minutes. The autopsy revealed the bullet lodged in the posterior wall of the internal carotid, it having passed through the vessel, making a rent in its anterior wall, through which blood had issued, forming and filling the cavity of a large aneurism. The pressure within this sac had been such that the blood had burrowed its way beneath the mucous membrane, up the right side of the throat, and forward upon the roof of the mouth, beneath the periosteum, forming the tumour opened. Thus the surgeon's cut, although two inches from the carotid, had entered an aneurismal sac directly connected with a large opening in that vessel. The clots remaining in the aneurism were in an advanced stage of softening, and about the lower part of the cavity pus was found in small quantity.—*Boston Med. Journal*, October 30.

Labourers' Dwellings in Brighton.—An exhaustive report was recently presented to the Town Council of Brighton by their Sanitary Committee, in reference to two areas which had been declared to be unhealthy under the provisions of the Artisans and Labourers' Dwellings Act. Eight plans, with the estimated cost of carrying out each, were submitted, but the Committee especially recommended two for consideration. The one would involve an expenditure of £70,000, and the other of £53,000. The first scheme was ultimately adopted. It provides for the purchase of five acres adjacent to the two condemned areas, on which cottages are to be built for the displaced working-classes. The land acquired by the pulling down of existing houses is to be set apart for houses of a better class, and for widening the thoroughfares. It is estimated that the total expenses will be £129,000, but the Council will realise £50,000 by the re-sale of land.

The Piedmontese Marine Hospital.—As we have noticed in former articles, the Italian marine hospitals established of late years have proved of great success. One was established in 1871, at Sestri Levante, by subscriptions raised at Turin, and has progressed very satisfactorily, judging from the report for 1878, noticed in the *Gaz. Med. Lombardia*, December 20. According to this, 24 per cent. of the scrofulous children are completely cured, 50 per cent. are notably alleviated, 24 per cent. obtain a moderate advantage, and only 2 per cent. are entirely refractory to all the beneficial influences of the locality. Several of those said to be notably alleviated were found to be quite cured on being visited four months afterwards. Three-fourths of those who were treated had never seen the sea before. Their residence lasted forty-five days each patient, the majority being from nine to sixteen years of age. The following is the classification of the forms of disease which they suffered from:—1. Scrofulous disease of the joints and bones, 61 males and 84 females; 2. Tumours and suppurating glands, 90 males and 49 females; 3. Superficial scrofula, 85 males and 102 females; total, 480 patients—245 males and 235 females. The number of baths varied from sixty-five to eighty. Of 406 who employed the baths, two-thirds increased in weight from one to seven kilogrammes, while 79 diminished by from 200 to 500 grammes.

Composition and Quality of the Metropolitan Waters in December, 1879.—The following are the returns (by Dr. Meymott Tidy) of the Society of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, etc.	Nitrogen: As Nitrates, etc.	Ammonia.		Hardness. (Clarke's Scale).	
				Saline.	Organic.	Before Boiling.	After Boiling.
Thames Water Companies.	Grs.	Grs.	Grs.	Grs.	Grs.	Degs.	Degs.
Grand Junction ...	22·50	0·060	0·195	0·000	0·008	15·4	4·2
West Middlesex...	22·90	0·056	0·210	0·000	0·008	15·4	4·2
Southwark and Vauxhall ...	23·10	0·049	0·180	0·000	0·008	14·8	4·2
Chelsea	21·10	0·052	0·180	0·000	0·008	14·3	4·2
Lambeth	22·10	0·052	0·180	0·000	0·008	14·3	4·2
Other Companies.							
Kent	31·10	0·012	0·450	0·000	0·004	21·2	7·0
New River ...	21·90	0·023	0·200	0·000	0·007	13·7	3·7
East London ...	23·50	0·073	0·195	0·000	0·008	14·8	4·6

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours. The water was found to be clear and nearly colourless in all cases.

Dr. Hime has been elected President of the Sheffield Literary and Philosophical Society for the ensuing year.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

An Actuary.—Yes. Dr: William Farr, F.R.S., is an old member of the profession, and has had many honorary distinctions conferred on him.

Hygienic.—1. Yes, inhabited cellars are an abomination entirely absent from Paris. 2. No doubt the sanitary value of trees is becoming more fully recognised.

Dr. Campbell.—As already stated, only one essay has been sent in for the Collegial-Triennial Prize, and not one for the Jacksonian Prize, of the Royal College of Surgeons.

The Gatling Gun.—It may not be generally known that to a member of our profession is due the invention of this deadly instrument of modern warfare—viz., Dr. Gatling, of North Carolina. It is the original of the various mitrailleuses which have figured in the more recent continental wars.

Staff-Surgeon, Richmond.—The "Gilbert Blane" Gold Medal will, we understand, be awarded in about a week. No less than eight journals have been sent in from as many naval surgeons. The adjudication is left to the Presidents of the Royal Colleges of Physicians and Surgeons, and Sir Alexander Armstrong, the Director-General of the Medical Department of the Royal Navy.

The Coroner for East Sussex: a Query.—The Chief Constable, in reply to an inquiry by the chairman at the Sussex Assizes held at Lewes lately, whether the appointment of Coroner for East Sussex, held by Mr. Fullagar, who had been sentenced to penal servitude, was filled up, stated that, in accordance with instructions from the Home Office, he had applied to Mr. Bostock, the Coroner for the Western Division, who was now holding inquests in both districts. After some discussion, it was decided an application should be made to the Home Office for further instructions, it being considered doubtful whether or not Mr. Fullagar's office was void by reason of his conviction.

The Present Season.—A correspondent sends the following extract from the Harleian MSS.:—

"If Christmas-day on Thursday be,
A windy winter yon shall see,
Windy weather in each week,
And hard tempest strong and thick;
The summer shall be good and dry,
Corn and beasts shall multiply."

The Criminal Code: the Proposed Government Bill.—We suggested the other day, an evening contemporary remarks, that, in order to obviate the danger which arises from the professional competition among experts in lunacy, only doctors especially licensed by the State should be permitted to give certificates of insanity. Another aspect of the question which we were then discussing derives additional importance from the prospective establishment of the Criminal Code, which, it is now said, the Government are determined to pass into law in the course of the next Session. With respect to the 544th and 545th clauses of the Attorney-General's Bill, as they are at present drawn, provision is made for new trials of convicted persons on the ground that the verdict was against the evidence; and if the Secretary of State entertains any doubt in a case after application for the mercy of the Crown on the part of a person convicted, instead of advising a remission or commutation of the sentence, he can, if he thinks proper, order a new trial. In conclusion the writer adds—"Of the general policy of allowing appeals or new trials in criminal cases, and of substituting a regular judicial proceeding for the *régime* now in force at the Home Office, we do not say anything, but it is certain, from past experience, that the vast majority of the applications which will be made under the Attorney-General's Bill, if it becomes an Act of Parliament in its existing shape, whether to the Court of Appeal or to the Home Secretary, will be in cases of murder, in which the plea of insanity has been urged at the trial or set up after the conviction of the prisoner. The Commissioners, to whom the original draft of the Criminal Code was reported last year—Lord Blackburn, Mr. Justice Lush, Mr. Justice Barry, and Mr. Justice Stephens—determined to make no alteration in the law as it now stands with respect to insanity regarded as a justification, if not an excuse, for crime, and the Bill in its present shape is, therefore, simply declaratory on the subject. But unless some provision be made for the assistance of the Court of Appeal or the Home Secretary by official advisers, in cases of alleged insanity, it may well be feared that the Criminal Code Bill will open a fresh field of almost portentous dimensions to the industry and ingenuity of the 'mad doctors,' as full of promise of fees to them, as it will be of pit-falls in the pathway."

Is Carbolic Acid a Disinfectant?

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—In your paper of 10th inst. we observe that, in the opinion of Dr. Tripe, carbolic acid is *not* a disinfectant; but it is not clearly shown on what grounds he has arrived at his decision. Against that opinion we could cite a large mass of evidence to the contrary (based on experiments made by men of high repute), which to most people would afford convincing proof that carbolic acid *does* act as a powerful disinfectant, and that it is the most reliable yet discovered. Of course Dr. Tripe does not stand alone in his opinion, but we have so far been unable to learn what *practical test* would thoroughly satisfy those who doubt the disinfecting power of *genuine* carbolic acid.

We are, &c.,
F. C. Calvert and Co.

The Least Painful Way of Killing Animals for Food.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I was obliged by your insertion of my article, "What is the Easiest Mode of Killing Animals for Food?" in the *Medical Times and Gazette* for October 4, 1879, particularly as it induced the publication by "Delta" of an important experiment, in relating which he says, "the mutton was tender, dark-coloured, and very well flavoured" in a sheep killed by Dr. Carson's humane method, which must leave a great excess of carbonic acid gas in the flesh, as the animals are not bled (*Medical Times and Gazette*, November 1, 1879). M. Brillat Savarin ("Physiologie du Goût") also tells us that he shot a wild turkey, and found its dark-coloured flesh much superior to that of the tame turkey, the attempt to whiten which too much has justly been prosecuted by the Society for the Prevention of Cruelty to Animals (see their last monthly report). Sir J. Eyre, in his work, "The Stomach and its Difficulties," also alludes to the barbarous plan of attempting to whiten veal too much; and it seems probable, as far as the taste and nutritious power of the meat are concerned, veal very little whitened is preferable. But as the eye must be fed too—and fashion will have its own way—this species of inhumanity is likely to prevail. Although I have great respect for Dr. Carson's humane plan of slaughter, yet it seems probable that the animal would be killed with less pain were it placed in an atmosphere of carbonic acid gas or oxide in the manner described in my note of October 4, because it would be unconscious it was going to be killed. Otherwise, as to quickness of death, as Beeton says this is instantaneously produced by a sudden blow on the forehead ("Domestic Management"), perhaps this would be as good, provided a skilful butcher were employed; but as, when many years ago attending the slaughter-houses, I found a very great difference in this respect, this is an extra reason, in addition to its advantage for the public health, for public slaughter-houses. If these were enforced by law, it would easily be seen whether the great quantity of blood (now, I think, generally thrown away by butchers) could not be retained as a most useful and nutritious article of food, especially when there is so much poverty in this country, and famine threatening Ireland. It also seems the time for a rigid inquiry by our best chemists as to what meat is really "unfit for food," for, according to the work of the late Dr. Letheby ("On Food"), this point is very difficult to determine; and food should certainly not now be wasted.

I am, &c.,
H. Prater, M.D.

The Coffee-Tavern Movement.—A coffee-tavern is about to be built at Cromer. A similar establishment has just been opened in Westgate-street, Ipswich, and known as the "Berners Arms." A second village coffee-house was opened on the 10th inst. at Aylestone, Leicester. The well-known "Dolphin Inn," in the High-street, Cowes, has been opened as a coffee-house tavern. It is intended to open a similar establishment at East Cowes, to be called the "Osborne Coffee-Tavern." At Stamford, recently, Dr. Acland assisted at the opening of a coffee-tavern, the first of its kind in that town, established under the auspices of the Church of England Temperance Society. Dr. Acland took occasion to remark that if there was any fundamental significance in this movement it was because the best efforts had been directed to the remedy of drinking customs and prejudices, which were only to be overcome by the three great factors in the progress of the human race—viz., morality, religion, and science.

Agricultural Employment in Insanity.—At the Berkshire Epiphany Sessions held recently at Reading, the sanction of the Court was given to the visitors of the Moulsford Asylum to obtain eighty-four acres of land adjacent to the Asylum, on a lease of sixteen years, to employ the inmates upon, and also for £450 for stocking it, the opinion of the medical staff being that such employment would conduce to the cure of the inmates.

The Celebrated Leicester Pork Pies.—At the Leicester Borough Police-court, a firm of pork-pie and sausage manufacturers have been charged, under the Public Health Act, with having in their possession twenty-five pieces of beef, deposited for the purpose of sale and intended for the food of man, which were unwholesome and unfit for human consumption. Dr. Johnson, the Medical Officer of Health, said he had examined some of the meat. It was very poor, and, judging from its condition, the animals when slaughtered must have been in a very emaciated condition. There was not a single ounce of the beef fit for human food. No amount of exposure would make meat present the appearances that this did. Food in such a condition would produce disease in the general public. In defence it was urged that the defendants were not aware that they were using meat in a bad condition. No doubt when it came in it was poor, but suitable for many purposes, and probably for the business of the defendants. The magistrates expressed their regret that persons in a respectable position of life, with a large and extended trade, should have been guilty of preparing for food meat which they must have known would not have been fit for that purpose; and they marked their opinion of the seriousness of the case by fining each of the defendants £100, or in default of distress three months' imprisonment.

Urban and Rural Sanitary Works.—The Borough authorities of Birmingham are about to erect a new lunatic asylum at Rubery Hill, near to Bromsgrove, about eight miles from Birmingham. The asylum is intended to accommodate 616 patients, and is arranged in groups or blocks of buildings, that from time to time, as occasion may require, other blocks may be added. The estimated cost is £82,861.——The series of additions and alterations which have for some time been going on at the Three Counties Asylum, Stotfold, Hertfordshire, are completed. The total cost, including the new east and west wings, converting the old chapel into new apartments for the medical officer, special dormitories (male and female), and other improvements, is £65,000.——The Youghall Sanitary Authority have decided on a scheme for supplying water to the Strand district from wells at Seafield, at an initial cost of £400. ——The Mansfield Rural Sanitary Authority have borrowed, for sewerage works at South Normanton and Tibshelf, respectively, £2490 and £1960. ——The Rural Sanitary Authority of Lancaster has ordered plans to be prepared for the disposal of the sewage of Galgate, by discharge of the effluent into the Conder, near Thirnham Mill. ——A scheme has been approved for sewering Glasson Dock district. ——The Hove Commissioners have adopted the recommendation of the Sanitary Committee to establish a public abattoir, and not to grant any fresh licences for the erection or occupation of slaughter-houses in the town. ——The Bingley Improvement Commissioners have decided to apply to Parliament, next session, for power to purchase Sunnydale Estate for waterworks purposes.——The Joint Counties Asylum at Carmarthen is being considerably enlarged, at a cost of £12,510. ——The Leeds Local Authority are about to give up the contracting system, and will henceforth do the scavenging work by their own workpeople. — A large service reservoir, for the districts of Saltburn and Marske, has just been completed by the Cleveland Water Company at Skelton. The reservoir holds 750,000 gallons of water, equal to a three days' supply for the district served.

Mysterious Death.—The inquiry into the case, to which reference was made last week, was resumed on the 10th instant. Dr. Scattergood, of Leeds, now supported his written report of the previous week, that no poison was to be found in the stomachs of the deceased sent to him. He had also been to Hamer and carefully examined the house, and the only thing he could suggest was that death arose from narcotic poisoning by the admixture of carbonic acid and carbonic oxide. He, however, found it difficult to understand how sufficient poisonous gases could accumulate to cause death. He supposed that after going up to bed, the gases from the turf fire, in the room beneath, had penetrated through the chinks of the floor to the bedroom, and so poisoned the atmosphere as to cause death. In reply to questions from the Coroner as to certain appearances of the lungs of the deceased, Dr. Scattergood stated that they were quite consistent with death from narcotic poisoning, and that at first led him to this supposition. Dr. Walker, of Pickering, who had been specially deputed by the coroner to examine the bedroom and analyse the air therein, deposed that it was very damp; there was no fireplace in it, no currents of air from the room below, nor connexion with the chimney. The cubic space of the room was 1253 feet. He had analysed the air of the room, and had found it contained of carbonic acid eight parts in 10,000, whilst air in a natural state contained four. If in poisonous proportions, there would be 5 or 6 per cent. of carbonic acid. Dr. Walker made the post-mortem examination, and the appearances were consistent with death either from cold or from narcotic poisoning. He did not think they had been poisoned by morphia, but it was very probable the young men had suffered from cold, which might have been an important factor in causing their deaths. It was impossible for anyone to say what was the real cause. The jury returned a verdict "That the deceased were found dead in bed, at Hamer, on December 16, but there is not sufficient evidence to satisfy us as to the cause of death."

COMMUNICATIONS have been received from—

The Secretary of the Senatus of the University of Edinburgh; Dr. H. Prater, London; The Registrar of Apothecaries' Hall, London; Mr. John C. Lucas, India; Mr. Edward Nettleship, London; Mr. John Bellamy, London; Mr. J. Hall, London; The Bedell of the Royal College of Physicians, London; Dr. W. Carter, Liverpool; Dr. A. H. F. Cameron, Liverpool; Dr. I. W. Hime, Sheffield; The Hon. Secretaries of the Harveian Society of London; Dr. C. Meymott Tidy, London; The Registrar-General, Edinburgh; The Hon. Secretary of the Society of Medical Officers of Health; The Editor of "Iron"; Prof. Spence, Edinburgh; Mr. Shirley F. Murphy, London; Dr. Ed. I. Sparks, Mentone; Dr. J. W. Moore, Dublin; Mr. F. Canton, London; Mr. J. Davidson, London; Mr. George Field, London; Mr. J. H. Johnson, Camberwell; Dr. R. H. Semple, London; Messrs. F. C. Calvert and Co., Manchester; Mr. Joseph M. Ryan, Sheffield; Dr. Landolt, Paris; The Sanitary Commissioner, Punjaub, India; Dr. J. Mitchell Bruce, London; The Secretary of the Quekett Microscopical Club, London; Dr. Taylor, London; Mr. C. J. Cullingworth, Manchester; The Secretary of the Royal Institution, London; The Secretary of the Pathological Society; The Secretaries of the Medical Society of London; Mr. J. Chatto, London; Dr. J. Matthews Duncan, London; Dr. Gavin Milroy, Richmond; Mr. T. M. Stone, London; Mr. D. Colquhoun, London; Dr. A. P. Stewart, London; The Secretary of the Medico-Chirurgical Society.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Centralblatt für die Medicinischen Wissenschaften—Gazette Hebdomadaire—Louisville Medical News—Nature—National Board of Health Bulletin—Revue Médicale—Vaccination Inquirer—Weekly Return of Births, Marriages, and Deaths—El Siglo Medico—Revue des Sciences Médicales—Glasgow Medical Journal—Anti-Vivisectionist—The Boston Medical and Surgical Journal—Monthly Return of Births, Marriages, and Deaths—Boston Journal of Chemistry—Practitioner—Birmingham Medical Review—Stirling Journal and Advertiser—New Preparations—Rivista de Medicina—Westminster Review—El Observador Medico—Nordiskt Medicinskt Arkiv.

BOOKS AND PAMPHLETS RECEIVED—

Essays on the Treatment of Skin Diseases, by Balmanno Squire, M.B.—Journal of Anatomy and Physiology, vol. xiv., part 2, January, 18 0—St. Bartholomew's Hospital Reports, vol. xv., 1879—Braithwaite's Retrospect of Medicine, vol. lxxx.—Economical Cookery, by Mrs. Addison—A Case of Complete Inversion of the Uterus, by Clifton E. Wing, M.B., Boston.

APPOINTMENTS FOR THE WEEK.

January 17. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

Royal Institution, 3 p.m. Prof. T. Rupert Jones, "Coal."

19. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. Second Lettsomian Lecture—Mr. W. F. Teevan, "On Enlarged Prostate."

20. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Pathological Society, 8½ p.m. Dr. Coupland - Late Hereditary Syphilis; Organs affected by Visceral Syphilis. Dr. Lees—Malformation of Heart, with Transposition of Aorta and Pulmonary Artery. Mr. Godlee—Dislocation of External Semilunar Cartilage of Knee-Joint. Mr. Eve—1. Dislocation and Fracture of Clavicle; 2. Dislocation forwards of First Phalanx of Thumb. Dr. R. Smith—Œsophagus and Stomach from a Case of Carbolic Acid Poisoning. Dr. W. Ewart - Congenital Malformation of the Left Kidney; Double Ureter on Both Sides of the Body. Mr. Hulke - Drawings of Cancer. Dr. Pye-Smith—Membranous Inflammation of the Air-Passages. Mr. Morgan—Specimen of Diseased Bone. Dr. Goodhart - Congenital Occlusion of the Duodenum; Gangrene of the Colon. Dr. Norman Moore—Ulcer of Stomach; Perforating Ulcer of Duodenum. Dr. Gilbart Smith—Epithelioma of Pharynx. Dr. Buzzard—Cases of Locomotor Ataxia, with Osseous and Articular Lesions (living specimens).

Royal Institution, 3 p.m. Prof. Schäfer, "Physiology of Muscle."

21. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Lister), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.

22. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

Royal Institution, 3 p.m. Mr. H. H. Statham, "Modern Architecture since the Renaissance."

23. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

Clinical Society, 8½ p.m. Mr. Pick, "On a Case of Subastragaloid Dislocation." Dr. Hewan (for Mr. Adam), "On a Case of Bullet-Wound of the Lung." Dr. Habershon and Mr. Davies-Colley, "Pyelitis; Discharge of Pus; Incision in the Loins; Recovery." Dr. Habershon, "Chylous Urine after Ague in India; Albuminuria; Cessation of Chylous Urine with the Development of Glycosuria and Polyuria." Dr. Pavy will exhibit a Modified Form of the Copper Test for Sugar, specially adapted for Clinical Use. Dr. Sturge will show Two Cases of Trade-Neurosis.

Quekett Microscopical Club (University College), 8 p.m. Meeting.

Royal Institution, 9 p.m. Dr. Carpenter, "Sea and Land in relation to Geological Time."

VITAL STATISTICS OF LONDON.

Week ending Saturday, January 10, 1880.

BIRTHS.

Births of Boys, 1278; Girls, 1292; Total, 2570.
Average of 10 corresponding years 1870-79, 2819·6.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	867	887	1754
Average of the ten years 1870-79	905·7	923·9	1829·6
Average corrected to increased population ...	...	...	1830
Deaths of people aged 80 and upwards ...	...	...	63

Note.—The births and deaths registered last week may be compared with the average numbers in the corresponding weeks of the ten years 1870-79 after raising the average by 7 per cent. for increase of population.

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa
West	561359	4	7	10	1	16	1	2	1	1
North ...	751729	1	4	20	2	27	...	3	2	1
Central ...	334369	...	6	3	1	8	...	3	1	...
East	639111	1	17	15	2	13	1	2	...	3
South	967692	2	14	25	5	51	...	5	1	5
Total	3254260	8	48	73	11	120	2	15	5	10

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	30·383 in.
Mean temperature	34·8°
Highest point of thermometer	43·9°
Lowest point of thermometer	29·3°
Mean dew-point temperature	33·1°
General direction of wind	Variable.
Whole amount of rain in the week	0·05 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, Jan. 10, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1880.*	Persons to an Acre. (1880.)	Births Registered during the week ending Jan. 10.	Deaths Registered during the week ending Jan. 10.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In centimetres.
London	3664149	48·6	2570	1754	43·9	29·3	34·8	1·56	0·05	0·13
Brighton	107321	45·6	57	41	43·0	30·0	35·7	2·06	0·00	0·00
Portsmouth ...	134224	29·9	79	52	...	...	...	...	...	...
Norwich	85827	11·5	65	29	41·8	32·0	36·8	2·67	0·00	0·00
Plymouth	74993	53·8	42	51	50·0	32·7	41·2	5·11	0·12	0·30
Bristol	213536	48·0	153	108	46·0	29·7	36·5	2·50	0·05	0·13
Wolverhampton ...	75970	22·4	54	34	45·3	28·0	36·8	2·72	0·00	0·00
Birmingham ..	394738	47·0	338	176	...	...	...	...	...	...
Leicester	129912	40·6	84	44	...	...	...	...	...	...
Nottingham ...	173627	17·4	137	76	46·0	29·9	37·8	3·23	0·03	0·08
Liverpool	544056	104·4	491	295	49·2	30·3	38·9	3·83	0·01	0·03
Manchester ...	363130	84·6	318	174	...	...	...	...	...	...
Salford	185788	35·9	153	78	...	...	...	...	...	...
Oldham	115413	24·7	80	55	...	...	...	...	...	...
Bradford	197196	27·3	106	76	49·2	31·2	41·2	5·11	0·02	0·05
Leeds	318929	14·8	210	121	47·0	32·0	41·8	5·45	0·02	0·05
Sheffield	304938	15·5	201	120	48·0	30·0	39·5	4·17	0·03	0·08
Hull	149627	41·2	146	72	46·0	29·0	37·2	2·89	0·03	0·08
Sunderland ...	116730	44·2	99	47	50·0	31·0	41·6	5·34	0·00	0·00
Newcastle-on-Tyne	149366	27·8	110	61	...	...	...	...	...	...
Edinburgh	229839	54·8	155	97	49·8	25·6	40·9	4·94	0·01	0·03
Glasgow	589598	97·7	410	262	...	...	...	...	...	...
Dublin	314666	31·3	184	245	57·8	28·1	41·7	5·39	0·00	0·00
Total of 23 Townsin United Kingdom	8633571	39·2	6242	4051	57·8	28·0	38·8	3·78	0·02	0·15

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 30·38 in. The lowest reading was 30·27 in. on Sunday evening, and the highest 30·50 in. at noon on Wednesday.

* The figures for the English and Scottish towns (except for Nottingham, Salford, and Oldham) are the numbers enumerated in April, 1871, raised to the middle of 1880 by the addition of nine years and a quarter's increase, calculated at the rate which prevailed between 1861 and 1871. Revised estimates have been adopted for Nottingham, Salford, and Oldham, based upon special returns of inhabited houses existing within those boroughs. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE
ON TUMOURS AND CYSTS OF THE VAGINA AND PUDENDA.

By J. MATTHEWS DUNCAN, M.D., LL.D.,
Physician-Accoucheur and Lecturer on Midwifery at St. Bartholomew's Hospital.

I do not propose to say anything to-day about the most important tumours of the vagina and pudenda—those, namely, which are produced by cancer, lupus, elephantiasis, or caruncle.

The vulva is the seat of many forms of wart and non-contagious molluscous growths, which I merely mention. The finest specimens of warts are, you know, syphilitic.

Fatty tumours of the vulva are not very rare. I have seen one which was remarkable for its size, which was that of an enormous orange, and for its being pediculated like a polypus; it was removed without any trouble.

In the vulva you sometimes find polypi hanging out of the vagina. These of course have nothing to do with our present subject. In like manner you, very rarely, have a polypus hanging from the bladder into the vulva, the stalk passing through the urethra. There is another rare affection, of which I have seen only one example, which I shall mention now. It was a fibrous polypus of the urethra in a young woman suffering from gonorrhœa and intense strangury. The case was complicated by the presence just within the urethra of a fibrous tumour, which was red and acutely inflamed; it was of the size of a boy's marble, and had a thin short pedicle attaching it to the middle of the urethra; it was easily removed. This fibrous polypus gave no trouble till the gonorrhœa began, and then it appeared to be the cause of a part of the intense severity of the strangury arising from the gonorrhœal cystitis of which she was the subject.

Fibrous polypus of the vulva is a rare disease; I have never seen one, but I have read of several. Sometimes they are very large: they have indeed been described as being so big as to hang down nearly to the knees. Fibrous tumour of the vulva, not polypoid, I have seen examples of. In one young woman the tumour was the cause of a good deal of pain; it was situated near the posterior extremity of one labium majus, and was of the size of a large chesnut. Another case of fibrous tumour of the vulva occurred recently in "Martha"; I shall read it to you:—

"L. N., aged thirty-four, has been married for fifteen years and has had seven children; the last twenty months ago. She has been delivered by instruments three times, and has had flooding post-partum three times. Catamenia began at fifteen, and have been regular, except that since last confinement they have appeared every three weeks. Has for five years had pain in the private parts, which has been aggravated lately. For three years has felt a lump in the left labium, and she has generally a little pain in it, sometimes a sharp shooting. A fibroid of the size of a small chesnut can be felt in the highest part of the left labium, at the side of the urethral orifice, deforming the labium by its projection. It is not tender, freely mobile, densely hard. It was easily enucleated. On section it was found to be a dense fibrous mass, having in some parts a cartilaginous appearance."

Fibrous tumour of the vagina and fibrous polypus of the vagina both occur, but they must be very rare, for I have not seen either. They produce symptoms closely resembling those of fibroid of the uterus, including discharge and bleeding, and they are treated according to the same principles—indeed, in the same manner as fibrous tumours of the uterus. Of course they are proportionally much more often subjected to surgical treatment, and especially to removal, because of their more easy accessibility.

I now come to consider the subject of cysts of the vagina and pudenda; these cysts are naturally, in the present state of pathology, referred entirely or almost entirely to retention. I have been lecturing lately upon the subject of retentions; and these cysts are undoubtedly, at least in the majority of instances, cases of retention—the retention of the natural secretion of the cyst, which is closed.

What are the potential or natural cystic cavities in this region? The most common little cavities are the mucous and sebaceous follicles, and they may be closed and become replete and distended. You have also occasionally remnants of the ducts of Gärtner, which may come down by the side of the vagina. Of retention in these ducts I shall say nothing more, because not a single case is known in which the accumulation of fluid has been proved to be situated in a dilated duct of Gärtner; it is merely a supposition. Then you have the most common retention cysts from closing of the aperture of one or of both Cowper's ducts—the ducts of the glands of Cowper or Bartholin or Duverney or Huguier. The closure of these ducts is not at all rare, and I have no doubt that, in the course of even a general practice, you will see cases of it. Then you have peritoneal cysts; and I shall speak presently of the cyst of Nuck, which occurs in the groin. Besides these, you have cysts which I cannot avoid mentioning, but which do not come into this category of proper cysts of the peritoneum; they contain fluid or bowel or omentum, and are, like ordinary herniæ, not closed cysts, but morbid peritoneal sacs having communication with the general peritoneal cavity. I shall speak of them again.

Before I advance further I shall enter on the subject of diagnosis, in order to exclude it afterwards. You may have in the vulva a cystocele projecting through the orifice of the vagina, by which it may be strictured or grasped firmly. Such a cystocele may be much distended, so as to have an extraordinary likeness to a cyst. The cystocele may be entirely within the vagina, the bladder hanging into the vagina in a bag-like form resembling a cyst; and cases are on record in which it has been taken for a cyst and punctured, when the treatment ought to have been to empty it by a catheter and then to support it. This occurs chiefly during parturition.

Procidentia uteri is not a cyst nor anything like one, but I have known several cases of cyst diagnosed as falling forth of the womb.

A pouch of the urethra is a rare occurrence; it is sometimes called "urethrocele," and this has been mistaken for a cyst. Sometimes it is nearly a cyst, having only a small opening into the urethra; and you must take care, in the case of a cyst appearing to be on the urethra, that it is not connected with it.

Occasionally you have cold abscesses—acute recent abscesses would not mislead you,—but cold chronic abscesses in the recto-vaginal or vesico-vaginal tissues are not very rare, and you may mistake them for cysts; indeed, the diagnosis may be impossible until you have evacuated them and seen the contents. You must remember, too, as a case now in "Martha" illustrates, that some collections of matter or blood in the lowest part of Douglas's space may mislead you.

There is also a cyst-like dilatation occurring at one side of the vagina, which I described in a former lecture under the name "unilateral hæmatocolpos." That is the condition of a woman who has a double vagina, one side of which is closed and filled with mucus or blood; and you might suppose it was a cyst of the vagina, when in reality it was an imperfect double vagina.

You must also bear in mind that recto-vaginal, vesico-vaginal, pudendal, and perineal herniæ are found. A case occurred lately to a friend of mine: he was called by a practitioner to open a cyst in the anterior wall of the vagina. He went prepared to do so, and found, to his astonishment, that the cyst on pressure disappeared, and on minute examination he found it was a vesico-vaginal hernia. If he had proceeded to open it he would almost certainly have destroyed the life of that poor woman. You must keep in mind the possibility of hernia.

In the labia you may have cold abscess and varix and œdema, producing tumours which must be distinguished from cysts.

Lastly, you have, what I mentioned before, cysts in the vagina which are merely hernia-like sacs filled with peritoneal fluid. A case of this kind occurred in my own practice. A woman with ovarian dropsy had been troubled with what was called procidentia uteri. This was not treated, for she died of the ovarian disease, for the relief of which no operation was performed. At the post-mortem examination it was found that her vagina was filled by a rounded cyst with a narrow neck. The seeming cyst was a peritoneal pouch or hernia, filled with dense ovarian fluid, which had

come or been forced through an aperture in the bottom of Douglas's space, making the peritoneum to protrude into the interior of the vagina as a pouch, which, when replete, resembled a cyst.

So much for diagnosis; from which you will see that there are many things to consider before you feel sure about a vaginal or vulvar cyst. The symptoms may be said to be none unless the cyst is inflamed or large, or produces mechanical inconvenience. If any of these cysts be irritated you have irritation of the neighbouring organs, especially the bladder. You will remember a case that I read, in a former lecture, of cyst in the vagina inserted upon the urethra; that case illustrates the production of symptoms by irritation of the cyst. The woman had no symptoms until the cyst was treated, and then she suffered, temporarily, from irritable bladder.

One mechanical form of irritation I must mention, because it is not the mere result of size. A lady was said to have falling down of the womb, and she had consulted several doctors, telling them that something came out when she stood up or walked about; and this irritated her, the womb, as she believed, slightly protruding when she was in the erect position. She was suffering from a glabrous mucous cyst, which produced no symptoms when she lay down—then it was within the vagina; but when she stood up it protruded through the vaginal orifice. It escaped observation, because it was glabrous, attached to the side of the vagina, and not very large. After it was treated the woman's mechanical annoyance disappeared.

And now a few words about each of the kinds of cyst. The first of these is the cyst of Nuck. The vaginal prolongation of the peritoneum, which is highly developed in man, is said occasionally to occur in woman, and to be nipped off from the general peritoneum in woman as in man. When this vaginal process is nipped off in a woman you have left a peritoneal potential cavity in the groin, which may become distended, just as a hydrocele distends the tunica vaginalis in the male. The only case of this kind I have seen was in the upper and outer part of the mons veneris; it lay at the external inguinal orifice, and was so constricted by it as to have an hour-glass shape, one part within the inguinal canal, and the other just beyond it. Opening it did not effect a cure, for it healed and was refilled; but the injection of tincture of iodine, after it was a second time opened, cured the woman.

Sebaceous cysts of the vulva, especially about the vestibule, are not rare, and a little cyst may irritate a woman and cause symptoms out of all proportion to the real gravity of the disease. I have seen many such cysts filled with yellow matter like pus or sebaceous matter, and I have never found any difficulty in treating them.

Closed cysts also occur in the labia which cannot be referred to dilatation of any natural cavity that I know of, but they are not common; they occur in situations where there are normally no cavities at all. The cases that I have seen have been easily treated just in the same manner as other cysts of the vulva.

Cysts of the vagina are not very uncommon, and they mostly occur in the lower half of that passage. They seem to occur at different depths in the vaginal tissue; sometimes having a wall so thin that it is translucent, or one so thick as to cause the cyst to feel like a hard tumour, as in the case I shall presently read to you. They are generally single, and may be of any size. The largest I have seen was fully the size of a Mandarin orange; it was nearly pediculated, and inserted very high up in the vagina, and protruded outside when the woman walked about, so that she thought she had falling down of the womb. These cysts seem to be very rare, but I have happened to see a good number of them; I cannot tell exactly how many—probably thirty. They can be treated very satisfactorily, and they almost always come under treatment only when considerable in size; and it is necessary to get rid of them, because all such diseases give rise to a good deal of anxiety in the patient's mind. The treatment consists in evacuating the cyst by opening it; but this is not always sufficient. Although this is sufficient in many cases, you must not trust to it; but you should do as you would in the case of a ranula, or of a cyst in Cowper's duct—cut out a bit of it to prevent it healing up. If you consider what a small hole a simple puncture will afterwards become when the cyst shrinks, you will see that it will naturally heal up, and then the cyst will be refilled. You therefore clip out a bit with curved scissors, having previously seized it with the vulsella. It is recommended by many to cauterise the interior of the cyst, or to irritate it. I do not believe this is required, nor that it will be successful in obliterating the cavity. If you examine a woman on whom you have operated, even years afterwards, you will find traces of the old cyst; at least, it has been so in cases I have examined after the operation: there is an opening that gives no trouble, and the woman is just as well cured as she can be. Cutting out the cyst has been recommended; but this would be difficult, and would involve much loss of blood and danger to life without any compensating advantage whatever. It would be an example of *nimia diligentia*, of surgical greed, from which I dissuade you.

An example of a hard-walled cyst occurred in "Martha" lately, which I shall now read to you. It is supposed to be a dilatation of a deeper vaginal crypt than those ordinarily seen, but I do not know whether this is true or not.

"M. W., aged twenty-four, married three years, has had one child, born August 8, 1879. No miscarriages. Has had no trouble with micturition. First noticed a lump in anterior wall of vagina in June, when it came down unexpectedly and without pain. Thinks it was as big then as now. Has had no pain in it nor disturbance, except that towards night it comes down, protruding between the labia, and interfering with easy walking. When she lies down it goes back. The pelvis is occupied by a rounded, resistant, hard, elastic, globose swelling, extending from the orifice of the vagina and the orifice of the urethra as high as the finger can reach. The part of it visible is pale and healthy. It is not tender. Sound enters the bladder in front of the tumour and towards its right side five inches. Bladder healthy. Lump was punctured by hypodermic syringe-needle, and a clear, limpid fluid drawn off, containing (about one-sixth) albumen and chlorides. The cyst was now incised so as easily to admit a finger, and a small piece of its wall was excised. Four days afterwards the finger with difficulty passed the opening, which was now enlarged. On dismissal a few days afterwards the cyst was big enough only to admit the first phalanx of the finger."

Long ago I saw a case of numerous cysts of the vagina; they were small cysts; but I am not sure that I should diagnose the case now as I did then, because since that time I have become aware of a remarkable disease called vaginitis emphysematosa, where the internal surface of the vagina becomes covered with little cyst-like blebs which are full of air, not of retained mucus.

Cysts of the glands of Cowper, or Bartholin, or Duverney, or Huguier (for they have received all these distinguished names) are described; but I have never seen one, and I feel uncertain of the accuracy of the diagnosis in cases of which I have read, because they are described as deforming the labium and projecting into the vulva, and I should not expect this result to take place. If one of the glands of Cowper were enlarged by becoming diseased and forming a cyst, I would expect it to appear between the posterior extremity of a labium and the nearer tuber ischii, where tumours are produced by inflammation and abscess of these glands, not in a labium.

Cysts of the ducts of Cowper's glands are not uncommon. We have had examples in "Martha," but I have brought none of them to read to you; it is not necessary to do so.

If you often examine visually the vulva you will find that the most common morbid appearance is a slight inflammation around the orifice of a duct of Cowper. This inflammation is utterly trivial. I never heard it complained of though, no doubt, it may cause minute irritation; yet I never have found this minute irritation the cause of complaint. The opening of the duct of Cowper in the middle of this little spot of redness is not much bigger than a punctum lacrymale. This may easily be closed either by blocking of the passage completely, or by atresia, from the growing together of the walls of the orifice; and, when this happens, you are sure to have dilatation of the duct by an accumulation within it of the secretion of the gland. This duct so dilated may, in time, become as large as a hen's egg, and I have seen it even bigger than this. In some cases it is described as being so enormous as not merely to deform the labium but to reach up the side of the vagina nearly to the neck of the womb. The side most often affected is, curiously, the left.

The disease is easily recognised by the painless semi-globose

deformity of the posterior half of a labium. It is often swollen so much that the wall of the cyst is translucent. This cyst produces no symptoms but such as are mechanical; chiefly interference with the functions of copulation or parturition. It is very easily treated; the same plan will apply as is used for a ranula or cyst of the vagina. You puncture it and clip out a bit of the wall so as to insure that the opening will not heal up. The piece should be cut out as near the situation of the natural opening of the duct as you can guess; that is, just outside the insertion of the hymen at its postero-lateral part.

You are likely to meet with several examples of this disease, and you will find no difficulty in curing them.

ORIGINAL COMMUNICATIONS.

OBSERVATIONS ON

THREE CASES OF SPASMODIC PARAPLEGIA.

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The subject of localisation in nervous disease, which, as applied to cerebral disease, has attracted so large a share of attention during the last ten years, both at home and abroad, has naturally been extended to the maladies of the spinal cord, and with hardly less success. It is true that many questions of extreme interest, which have arisen in the course of the inquiry in relation to the operations of the Brain, are absent in the case of the Spinal Cord; the more restricted relations of the latter do not permit the introduction of those wider speculations which the subject has suggested in connexion with the brain. Nevertheless, the gain to practical medicine, so far at least as diagnosis is concerned, has been considerable, and important additions have been made to our knowledge of the physiology of the cord from this study of the limitations of the morbid changes which take place in its tissue.

The three cases which form the subject of the following communication afford illustrations of a group of diseases of the spinal cord, to which much attention has of late been directed, in consequence, more especially, of observations made by German and French pathologists. The group of cases to which I refer brings into prominence an important function of the cord, that of reflex action, by being arranged around a particular class of symptoms resulting from an exaggerated development of that particular function. These symptoms consist in an exaggerated condition of reflex irritability in the spinal centres, whether excited by irritation of the surface of the body or by tension of the muscles or of their tendons; in peculiar forms of tremor or of clonic spasm; and in more or less permanent tonic contraction of the muscles of the affected limb, and often of the abdomen together with a greater or lesser degree of paresis; and they form a collection of phenomena sufficiently characteristic of themselves. The group is, moreover, rendered more specific by certain negative qualities connected with it, at least in the most typical instances, viz., the absence of affection of sensation, and of serious interference with the functions of the bladder or rectum.

The fundamental questions belonging to this particular form of disease are of course not new; the chief importance connected with the present aspect of the subject is derived from the groupings to which these forms of disease have been subjected, and from the clinical and pathological bases on which each group is constructed.

In a well-known paper by Dr. W. Budd, on the Pathology of the Spinal Cord (*Medico-Chirurgical Transactions*, xxii.), published in 1839, the author presented several cases, in which the chief point of interest was the illustration afforded by them of the condition of exaggerated action into which the reflex centres of the cord were thrown, when these centres were removed, by disease or injury, from the control normally exercised over them by the brain; the portion of cord in which the centres reside remaining itself sound, and the nervous communication between the centres and the muscles continuing intact. One or two of Dr. Budd's cases would have taken their place, at the present day, in one or other of the groups referred to above.

It is interesting to note that in this paper Dr. Budd discusses the same question relating to exaggerated reflex action which has arisen at the present time, viz., to use his own words, "whether the susceptibility to involuntary contraction in muscles that do not commonly exhibit it was owing to increased activity in the motor function of the cord, excited by the irritation of the injury, or was merely the consequence of the withdrawal of volition." Dr. Budd, whilst intimating his belief that "the mere withdrawal of volition would be sufficient to create the susceptibility," gives a qualified opinion in favour of the first-mentioned solution, at least as applied to his own cases.

Immediately following Dr. Budd's paper is a communication on the same subject by the physiologist with whose name the exposition of reflex action is chiefly associated in this country. I refer, of course, to Dr. Marshall Hall. The paper has also interest from its containing the record of an old controversy, carried on at that time with some vigour, with which Dr. Hall's name is particularly connected, on the nature of the relation which is held by the brain to the cord in controlling reflex action. In the paper in question the author, with his usual accuracy of observation, foreshadows the distinction, since fully established, between the different forms of peripheral paralysis on the one hand, and paralysis resulting from disease of the cord and from disease of the brain on the other. With respect to the relation of the brain to the cord in the matter of exaggerated reflex action in disease, Dr. Hall arrives practically at the opinion held at the present day, recognising the severance of the cord from the brain as the cause of the increased irritability of those parts in the former which retain their healthy structure, only he believed the "cerebrum in its acts of volition" to exhaust the irritability of the cord, in place of controlling that function, as is now the generally received doctrine.

The pathological basis on which rests the particular group of organic diseases of the cord, to which reference is now being made, wherein the spinal reflex function is released from cerebral control, has derived much interest at the present day from the typical cases having been found associated with chronic disease (sclerosis) of those tracts—the "pyramidal tracts"—in the cord which the researches of Flechsig in Germany, together with those of Pierret in France, supported by comparison with the pathological observations of Türck, have shown to be made up of fibres passing down the antero-lateral columns of the cord from certain regions of the cerebrum, and may therefore with probability be regarded as conductors of cerebral influence. Our knowledge, however, of the paths along the spinal cord by which communication is established with the brain is yet too imperfect for any positive conclusion to be drawn from what has been yet observed; but the concurring information, derived both from anatomy and from pathology, in relation to these tracts is certainly full of interest. That disease may be limited to the particular tracts in the cord just indicated, on one side or on both, is known by pathological observation; and the experience of disease concurs with the result of M. Pierret's researches, which go to suggest the "autonomy" of these tracts from their possessing a period of development proper to themselves. The disease-picture of sclerosis of the lateral columns of the cord is, however, as yet far from being complete. Originally, as is observed by Erb in "Ziemssen's Cyclopædia" (xiii., 622), "the principal symptoms . . . . had little by little been recognised, being taken from various complicated cases; . . . . and from these the picture of 'primary lateral sclerosis' had been constructed, with great probability of correctness." The field of research open to the clinical observer extends, in most instances, beyond the facts ascertained by the pathologist, and the present case is by no means an exception to the rule. Hence an important group, purely clinical and provisional, was formed by Erb in the year 1875, in order to include cases presenting the collection of symptoms believed typical of lateral sclerosis of the cord, but which have not been associated with any ascertained anatomical changes. This group, described by Erb in "Ziemssen's Cyclopædia" (vol. xiii.), was termed by him Paralysis Spinalis Spastica. A full account of the same disease was given by Charcot in *Le Progrès Médical* for November 4, 1876, and following numbers, under the title of Tabes Dorsal Spasmodique, coupled with the emphatic avowal of the purely temporary character of the grouping he had adopted. The distinguishing feature of the group is succinctly stated by Erb; the

positive symptoms are "paresis, paralysis, muscular tension, contractures, increased reflex action of tendons, a development which is slowly and as a rule systematically progressive from below upwards, etc.," and the negative symptoms, "absence of anæsthesia, of vesical and sexual weakness, of atrophy, of bed-sores, of cerebral symptoms." By both Erb and Charcot a state of sclerosis of the lateral columns is regarded as the probable lesion belonging to the cases in question. It is, however, already questionable whether such an explanation of the morbid anatomy will apply universally to these cases. My friend Dr. Saundby has reported from Schulz two cases in which typical symptoms of primary lateral sclerosis were present, but in both the disease was intracranial, and the cord was perfectly free from morbid change (*Birmingham Medical Review*, October, 1879). In this connexion I present my first case, as having considerable interest, for although (the patient being yet living) no anatomical details are present, yet the double recovery renders it very unlikely that any serious organic change had occurred in the tissue of the cord; even if it be supposed that a process of degeneration had commenced, the complete development of the symptoms twice repeated, and each time ceasing, would intimate that a severe form of the disease was compatible with an early period of tissue-alteration.

But notwithstanding a certain degree of independence enjoyed by the pyramidal tracts in the antero-lateral columns of the cord, as regards development and function, and frequently also as regards morbid change, disease, once established in their substance, is liable to extend to other districts of the cord. This liability is by no means peculiar to this particular part of the cord, and M. Charcot has pointed out, with his accustomed acumen, how a clinical group of symptoms characteristic of one form of partial disease of the cord may be invaded by the intrusion of fresh symptoms occasioned by an extension of the morbid process to some neighbouring district. My second case will afford an example of this extension made in the direction which appears to be most open, viz., to the anterior horns of the grey matter. Cases in which this extension takes place have received from M. Charcot a distinct place under the designation of "amyotrophic spinal sclerosis."

The question of the primary or secondary origin of the sclerosis, when ascertained to exist, and, indeed, I may say of spastic paralysis generally, is one which has not yet received a definitive reply. M. Charcot recognises a primary and a secondary form of the amyotrophic variety. Of the former he gives very precise details in his "Leçon 12me, Maladies du Système Nerveux, 2me série"; the latter, indisputably of far more frequent occurrence, he describes incidentally in the fifth and following lectures, whilst developing at full length the effects of slow compression of the cord. Cases of this last-mentioned condition are those which afford the most typical instances of the secondary form, at least when both halves of the cord are alike involved. The primary origin of this disease has, however, been altogether called in question, and reference has been made to the circumstance that the disease may be produced by damage to the motor tracts above their decussation; of this occurrence an example is given by Dr. Saundby in the quotation already referred to. With respect to the primary amyotrophic form, in which the anterior horns are supposed to be affected secondarily upon the sclerosis of the pyramidal columns, Dr. Gowers (*Medical Times and Gazette*, vol. ii. 1879, page 659) expresses his belief that M. Charcot's opinion in favour of this course of events will need reconsideration, suggesting "that the degeneration in the lateral columns is sometimes, at least, secondary to or simultaneous with the disease in the cornua." As to the primary or consecutive origin of the disease, my three cases afford an illustration of the difficulty of arriving at a decision from clinical study alone. Doubtless they were all of a secondary nature; but where the original disease was seated there were no means of accurately ascertaining. Altogether, they all tend to justify the creation of the provisional groups by the two eminent pathologists whose names I have quoted above.

Case 1.—*Two Distinct Attacks of Spasmodic Paraplegia, each exactly copying the other, and commencing with an Impaired State of Sensation and of the Function of the Bladder—Probably Complete Recovery.*

My first case exhibits two distinct attacks of the disease, the second attack following closely on the heels of the preceding one. The almost precise repetition of all the symptoms originally present when the relapse took place was very interesting. The history illustrates the difficulty of arriving at a satisfactory opinion, in many of these cases, as to the particular condition on which symptoms depended; the brief occurrence of pain in the spinal region, preceding the commencement of the symptoms by some months, and lasting only for a short period, was the only safe guide until we had gained the experience which the occurrence of relapse afforded. It then appeared that, although evidence of disease in the vertebral column was absent, the movements of the body in exercise were the principal agent which kept in activity the morbid condition operating upon the spinal cord, and the result of enforcing the recumbent position completely justified the conclusion. An opinion was formed, from the rapid influence of the erect position in bringing about a return of the symptoms, conjoined with the want of evidence of disease in the vertebræ themselves, that possibly the original morbid condition might be seated in one or more of the intervertebral fibro-cartilages—a condition described by the late Mr. Aston Key (*Guy's Hospital Reports*, 1839). I may add that Ollivier ("Maladies de la Moelle Épinière," vol. ii., page 326) quotes from Dance a case of fatal acute myelitis consequent on "alteration" of an intervertebral cartilage. The comparatively sudden access of the symptoms in each attack is noteworthy, and appears to indicate the operation of some irritating agent rapidly brought into action. Whatever be the exact nature of this agent, however, the early symptoms involving sensation and the functions of the bladder show that the later symptoms of spasmodic paraplegia resulted from the primary production of inflammation occupying a limited portion of the cord (transverse myelitis); and in this connexion it may be remarked that whatever of paresis there might have been in the condition of the muscles—a matter which of course could not be ascertained,—the main disabling agent was the spasmodic state set up in those muscles. It is interesting to add that Dr. Budd's first case, in the paper already referred to, exhibits four distinct attacks of paralysis, in the last of which occurred the spasmodic phenomena which it was the object of the paper to describe. The symptoms in the three preceding attacks are not mentioned. In this patient there was curvature of the vertebral column, and the spinal symptoms doubtless depended on those changes now known to occur in the vertebral ligament or in the spinal membranes under such circumstances. Transverse myelitis was actually found by him in his third case.

J. T., aged thirty-one, strip caster. Up to the last four years he admits having been "racketty," but ever since has led a temperate life. He clearly denies any symptoms of syphilis, though he acknowledges having freely given way to venereal indulgence. He has never met with any accident of importance, and the sole occurrence which could stand in the nature of a cause is frequent exposure to considerable alternations of temperature. His health has been excellent. His family history is quite satisfactory.

In September, 1877, he noticed an aching pain somewhere about the region of the tenth dorsal spine; it was worse when he was at rest, and sometimes compelled him to rise from his meals and stretch himself. He stayed at home for a week, and then gradually lost the pain until the following May, when it returned. It may be stated here, once for all, that throughout his stay in the hospital slight tenderness was found several times over the lumbar spines, chiefly over the second and third, but was not complained of until the patient's attention was drawn to it, and then only by close questioning. The only other defect in the vertebral column which could be discovered was that the lumbar column seemed less flexible than usual, but even this was questionable.

Soon after the return of the pain in May, 1878, the patient found his legs becoming weak, and he staggered in walking. Then he had numbness in his feet, which gradually rose to the ribs; and with this symptom also occurred a girdle pain at the level of the umbilicus. All these symptoms he dates, with singular precision, from June 24—a precision which gains probability from the rapidity with which a relapse of his symptoms took place in a later part of his case. He took to his bed on July 9, 1878, and in a few days had quite lost the use of his legs. A little later, about July 19, he had retention of urine; he neglected himself for a week, but then a catheter was used, and its use was continued for five

weeks after his admission on July 29, 1878, after which he recovered perfect control over the functions of his bladder. For a few days after taking to his bed he had marked difficulty in "getting rid" of his motions; for some days his bowels were confined, but opening medicine fully relieved him, and thenceforward he did not encounter further trouble in this direction.

As the numbness in the lower extremities subsided, it appears to have given place to dragging sensations about the buttocks and down the legs, and soon after taking to bed he "seemed to go stiff from his hips." Then startings in the legs occurred, nearly throwing him on the floor when seated in his chair; he had no power over his legs, and when tired of the extended position he got his wife to tickle the soles of his feet, when his knees would rise of themselves.

This involuntary action of the muscles of his lower extremities continued very troublesome during the first four or five weeks of his residence in hospital. The muscles of the abdomen were also very rigid.

At that time, he asserts, he felt contact only at the back of the knee; the heels and buttocks seemed as if they were raised from the bed through want of sensibility in the skin.

Sexual appetite had lessened for a month before he came into the hospital; during that time he had no connexion with his wife. After he was admitted, erections were frequent.

He was admitted into the hospital on July 29, 1878, nineteen days after having been compelled to take to his bed. He was a finely made man, having the appearance of robust health. The nutrition of his muscles was excellent.

I shall not enter into the particulars of his case during this period of his illness. During a part of it I was absent from town, and my duties were undertaken by my colleague, Dr. Saundby, who took much interest in the symptoms presented by the patient. Every phenomenon which was present at that time was completely repeated in the relapse, of which a full report will be given.

For two months, up to September 25, he had no power to raise his legs by voluntary effort; they continued rigidly extended. Two days afterwards (27th) he could raise each leg from the bed—in consequence, no doubt, of abatement of the spasm. When this improvement took place he suffered from shocks from the middle of the back down one or other leg. Recovery of motor power was for some time retarded by the extreme readiness of the muscles to fall into exaggerated contraction on the receipt of voluntary stimulus; the hamstrings were especially tardy in giving up this tendency. Nevertheless, he slowly and steadily mended, and was able to stand in January, 1879 (five months after coming under our observation), and finally to go into the hospital-yard, helping himself by the support of a stick.

On or about the 25th of the same month he relapsed, and all his symptoms returned, even more rapidly than he had begun to mend; in two days he was again perfectly helpless. The involuntary movements in the lower extremities reappeared, and the muscles of both limbs and of the abdomen resumed their former tense condition; more particularly the gastrocnemii, the hamstrings, and the adductors of the thighs. Retention of urine again set in, and the catheter was needed. With these symptoms was combined a considerable amount of anæsthesia in both thighs and both legs; the condition of the feet in this particular is imperfectly reported. This anæsthesia was decided as regards touch, but still more as respects temperature; he distinguished cold, but not heat. Electro-sensibility was remarkably low, especially in the left leg; he bore the strongest secondary current of Stöhrer's two-celled battery without complaining, although the contractions of the muscles raised the limb from the bed. He was, however, sensible of tickling in the soles, and the superficial reflexes were very active.

The patient continued in good health, though he lost flesh during the early period of the relapse; the muscles retained complete nutrition. He regained full control over the bladder on February 16. Up to March 1 the limbs had remained in rigid extension; on that day he succeeded for a moment in overcoming the spasm and completely bending his knees. He recovered power more rapidly than on the former occasion, and six days afterwards contrived to walk some yards by help of the bedposts; he flexed his knees easily and raised his feet. Rigidity had also much lessened in the abdominal muscles.

The patient began to walk on March 13, but with difficulty, owing to imperfect obedience of his muscles; but on the 24th he could get along without help from a stick, and was in the yard on April 7. He regained good general condition rapidly.

Although catheterism was discontinued on February 16, the urine presented some pus globules a few days afterwards, and at the end of a fortnight the quantity of pus was considerable. However, by daily washing the bladder the urine was restored to its healthy condition in the course of five weeks, and remained thenceforth quite normal.

A few words in addition will complete the description of the principal motor and sensitive phenomena during this period of relapse, the symptoms being a close copy of those which had been present during the first period. Tactile sensibility returned early; sensibility to temperature was delayed probably for a month later; electro-sensibility was recovered at a still later period. One observation only, consisting, however, of numerous experiments, was made on the effect of hanging weights on the feet. Great uncertainty existed even when the difference was between a sham weight and one of three pounds. The reflexes, superficial and deep, were much exaggerated. During the progress of recovery he used to ask that his legs might "be tried" under the bedclothes; and at a later period he was careful to put on his trousers before exhibiting his ability to walk—in both cases in order that he might avoid the contact of cool air. In the left leg, where electro-sensibility was the lowest, electro-contractility was at its highest point. Even the contact of the bedclothes caused the legs to rise.

The involuntary movements were the greater when the bladder was full. It was five or six months from the time of relapsing before ankle-clonus had departed, and even so long as he continued under observation the muscles were not quite free from uneasy action.

The optic discs were healthy.

The conclusion of the case may be briefly narrated. In our state of uncertainty as to the cause of the disease, one thing seemed important: that recovery had taken place whilst the patient was kept quiet in bed, and that each of the two attacks had come on after he had begun to walk about. Acting on this hint, I brought the patient back to bed after he had begun to walk, and kept him there.

I had a Sayre's jacket placed on him, though with no very definite object. He was not allowed to get up until the end of August, having then been an in-patient for thirteen months. He left the hospital in the following month. Early in October he told me that he had walked ten miles without discomfort. I last heard of him at the end of last December; the report was equally satisfactory.

As regards treatment, little need be said, since, although active measures were adopted, none could be connected with any beneficial results, excepting only the continued recumbent posture, and possibly the cautery to the back. A very active antisyphilitic treatment was employed during a considerable period, in consequence of statements which we afterwards discovered to be unfounded. His back was twice scored with a hot iron. Hypodermic injections of curare were given assiduously twice in the day, in each period of illness, during the prevalence of the spastic symptoms, up to one-sixth and one-fourth of a grain, without much influencing the exaggerated reflex action. He still wears the jacket, and has been cautioned against engaging in heavy work.

(To be continued.)

A WELL-KNOWN German oculist, Dr. Pagenstecher, of Wiesbaden, has just died from the effects of a gun accident.

DEATH OF AN INTERNE FROM SMALL-POX.—On the occasion of the death of M. Vigne, an interne of the Beaujon Hospital, who contracted the disease while attending some patients ill of small-pox, the journal *Le Temps* observes that it shows the insufficiency of the measures adopted by the Assistance Publique for the protection of their *employés*. It is true that a certificate of vaccination is required from every interne and externe, but the vaccination which this relates to may have been practised twenty or twenty-five years ago, while the certificate is sometimes given without the condition of the vaccine scars having been verified. The only true security consists in the Assistance Publique insisting upon the revaccination of all its *employés*. In this way it can prevent the ravages of small-pox occurring among them, although it is powerless with respect to diphtheria.—*Progrès Méd.*, January 17.

PRACTICE OF PHYSIC IN SMYRNA.

By JAMES M'CRAITH, F.R.C.S.,
Surgeon to the British Seamen's Hospital.

A CASE of encysted (so-called) calculus, reported in the *Lancet* (October, 1879), by Dr. Lediard, seems to me a fit occasion for calling the attention of the profession to the subject, and of calling attention to my views as given in the *Medical Times and Gazette* of July 13, 1872.

I call attention to Dr. Lediard's case, not in any spirit of criticism—on the contrary, I have to compliment Dr. Lediard on his success in the conduct of a case, perhaps the most difficult in all surgery,—but, as I conceive, a point of practice of much importance is connected therewith. In Dr. Lediard's case, and in a series of such, of which I will endeavour to give the diagnosis and history, I, from my experience, would say that "the median operation should alone be the rule."

In these cases, improperly called "encysted," no "cyst," properly speaking, exists; the mucous coat of the bladder does not line the bed in which the calculus is lodged, nor does any other lining membrane; the entire process by which the calculus has made a bed for itself external to the bladder is one of "ulceration," pure and simple. The stone, by the expulsive efforts of the bladder, is forced into the neck, and there gets impacted, fixed; but as in such case the urine dribbles away, and the bladder is kept empty, the constant pressure causes ulceration of the coats, and the offending body is ultimately expelled: nature then makes an effort at closing the opening, and, I believe, is capable, under favourable circumstances, of effecting this result. I am not in possession of any positive proof of this; but such result was very nearly achieved in one of my cases, noticed in the *Medical Times and Gazette*, July 13, 1872. In this case, at the age of six or seven years, the stone became fixed, got embedded, as explained above, and the patient remained without complaining—I cannot positively say without any suffering as I lost sight of him,—till, after sixteen or eighteen years, when he had reached his twenty-fourth or twenty-fifth year, he came back to be operated on, suffering very severely. He said he thought he had been cured by some powders (of soda) I had given him. Evidently he had suffered very little, or not at all, during all those years; and, in fact, a stone, under such circumstances, quite external to the bladder, will give but very little annoyance. This is exactly what must have occurred in the famous case of Mrs. Stevens, with the powdered egg-shells.

These cases take place in young subjects and adults (as distinguished from the old, where certainly no cyst exists); no enlarged prostate or stricture existing in the young, to cause straining in a full state of the bladder; to cause cysts,—there is always "incontinence," from the constant dribbling away of the urine (the bladder, contracted on the stone, cannot contain any),—this state of affairs must exist in order to enable the bladder to exert direct pressure on the stone sufficient to cause ulceration, and to bring about the so-called "encysted" state, which I am endeavouring to explain. Unhappily, from the mischief done to the neck of the bladder and sphincter by the ulcerative process, to allow of the extravasation of the stone, these cases, I believe, must be followed by incurable incontinence of urine. The calculi in these cases are moderately large: they must be moderately large to enable the bladder to exert sufficient pressure on them to cause ulceration. Their surface is never smooth or regular: on the contrary, it is extremely irregular, consisting of "processes," as it were, and "cavities," caused by anfractuosities, into which long granulations, like worms, are inserted—"fungosities," they have been named by many,—and by which the calculus is attached to the surface of the cavity in which it is lodged. This attachment to the mucous membrane of the bladder may exist in the case of a calculus still within the cavity of the bladder, though this is stated by standard authors to be all but impossible. It takes place in this wise. An ulcer exists on the mucous surface; from the irritation of the urine, or from its own nature, a "fungous" state of its surface is produced; crystals from the urine or small calculous particles come down from the kidneys, and these get entangled in the granulations or fungosities, and thus a stone, as it were, grows on the surface. A stone actually formed, I believe, cannot by any possibility get attached to the free surface of the bladder. To return to the encysted calculi, of which we are treating: their colour is dark, from the colouring matter of the blood, to which they have been exposed during the ulcerative process; they are longish in form, if they have remained any time in their bed. They lie in the long axis of the perineum; growing, as it were, in the direction of least resistance (if they do grow), or, as I suspect, they are rather diminished in size by absorption. They must be modified in shape and size in the cavity in which they are lodged, as all are of nearly equal size and similar shape.

As the stone is being forced through the ulceration, the coats of the bladder contract over it, so as ultimately to leave only a small round opening communicating with the bladder; and nature is perfectly capable, I believe, of quite shutting out the offending body, and thus curing the disease. In Sir A. Cooper's case, he says he brought away the stone without opening the bladder. He mentions no communication as existing between the cyst and the bladder; still, I suppose such must have existed, otherwise the patient would not have required any operation, and no stone could have been diagnosed as existing in the bladder; but no particulars nor any explanation are given in his case.

To continue the history of the encysted cases we are discussing. The bladder coats contract, or rather the ulcerated opening contracts, and ultimately a small opening (this may be called a fistula) only remains, about one-eighth of an inch in diameter. Of course, the stone during this process, which requires time, has been covered one-third (as in Dr. Lediard's case), one-half, three-fourths, etc., until ultimately only one-eighth of an inch as a round opening remains. It would appear that this, so to speak, fistulous opening has very little or no disposition to close up, so the stone forms a neck, as it were, through this opening, with button-shaped head, as in one of my cases (*Medical Times and Gazette*, April 14, 1866). Why the deposit did not continue, so as to form a secondary calculus, as I believe usually happens in these cases, and as happened in my case No. 6 (*Medical Times and Gazette*, July 9, 1864), I cannot explain. The form in such case is hour-glass. The secondary stone will have no nucleus, but will be formed thus: the layers are not concentric, but form in layers on the neck, which projects into the bladder. I am satisfied that the original stones—those contained in the bladder—were not at first of their present shape, but have been modified both in size and form by the action of the living tissues in contact with them. This action has moulded both into similar shapes and similar surfaces, and most likely more or less into equal size. I have known a piece of oxalate calculus, after a crushing operation, forced into the corpus bulbosum in attempts to extract it. To relieve the retention and to obviate extravasation, lithotomy was immediately had recourse to, and the piece was left *in situ*, midway between the bulb and meatus. A fortnight or three weeks afterwards, when the wound was healing, the operator cut into the hardened mass of effused lymph where the piece of calculus existed, but no piece was found; it had been absolutely absorbed by the tissues of the part—a proof that partial absorption of the calculi in question is possible.

I have seen two other cases perfectly similar, and I have met with a calculus impacted in the neck of the bladder, evidently in the first stage of this encysting process—making in all five cases in my limited experience; so such cases must be numerous, and the rule of practice proportionally important. In an analogous case mentioned by Sir B. Brodie, the ulcerative process took place behind the pubis, and the cavity in which the stone was contained communicated with the bladder by a round opening, the stone, as in my cases, being adherent to the walls of the cavity in which it was lodged. Some part, as in other cases, must have projected into the bladder to allow of its being diagnosed and operated for. Of course in this case the operation I advocate is not necessarily the one to be preferred.

In conclusion, there is a series of cases of so-called encysted calculi, by no means infrequent, and of which I believe I am the first to offer an explanation as to their history, manner of formation, and diagnosis, and to lay down a rule of treatment deduced from thence. The median operation should be the rule in such cases. A stone, as explained above, escapes from the bladder, as the bladder is in a contracted state; the opening forms low down in the neck; the escaped stone lies between the bladder and rectum; generally, or almost always, it can be felt by the

finger from the rectum; it may have a button-head or be of an hour-glass shape, the secondary stone lying in the cavity of the bladder, or it may be fixed, only one-third or more being contained in the cyst, as in Dr. Lediard's case. Now, if in such cases you perform the lateral operation, you must manipulate a good deal, as Dr. Lediard says was necessary in getting hold of the stone, and more particularly in clearing the cyst of calculous particles adhering to its walls; and after having succeeded in this (if you do succeed), you will leave a pouch communicating with the bladder in which urine and blood-clots will lodge, and prevent union, and cause danger to your patient. All these inconveniences, dangers, and difficulties you avoid by the median operation. You cut directly into the cyst on the stone, you bring it away; and if, as in Sir A. Cooper's case, the neck and head also come away, you need not cut the bladder at all. You can clear the cyst of adhering particles, of blood-clots, etc., and there remains a free direct passage for escape of urine, blood, or secretions which come away after the operation. If after bringing away the part of the calculus external to the bladder, you see that either a secondary stone or a button-head still remains in the bladder, you have only to enlarge the opening either on your grooved staff or with a probe-pointed bistoury, and bring the part away as you would do in an ordinary case. The advantages of the median over the lateral operation in these cases are so evident that I conceive it would be idle to discuss the question. In my encysted cases I found no difficulty. But we have still a great deal to learn of the natural history of encysted stones. I have hazarded an opinion that the stone is very much modified in size and shape by the action of the living tissues of the walls of the cavity to which it is adherent. I founded this opinion on the almost perfect similarity of such stones in shape—certainly not the shape they possessed before being lodged—and also in size. It is not probable that they were originally of almost equal size; but I have another proof for what I advance. I have a calculus in my collection; it is No. 44 (*Medical Times and Gazette*, July, 1872). It has a rounded base with a cauliflower-like head. It was fixed in the neck of the bladder, but not adherent. No ulceration apparently had yet taken place; the smooth part is divided from the rest by a deep furrow. This part being in apposition to the bladder, and kept so by being grasped in some manner or other, had ceased to grow; whilst the part free and in contact with the urine had increased very much by deposit of phosphatic, acicular crystals placed on end. Now, I believe that had time been given the furrow would have become deeper and deeper; and that ultimately the part excluded would have assumed the irregular surface, the size, and form of the others mentioned. The secondary formations, whether button-heads or round calculi, are always phosphatic. The broken constitution in these cases explains this.

Smyrna.

Charging for the "Know-how."—A coloured servant of a medical man in the South (*Pacific Med. and Surg. Journal*) to whom a patient, who had an important surgical operation performed, complained that his master had made a very steep charge of $25 for half an hour's work, when $5 would have been sufficient, replied, "He only charge you five dollars for de operation, de oder twenty was for de know-how."—*Louisville Med. News*, January 3.

Labourers' Dwellings at Islington.—At the last week's meeting of the City Commission of Sewers the scheme for erecting labourers' dwellings at Islington met with some opposition. A petition, supported by an influential deputation from the ward of Portsoken, was presented, praying the Court to take the necessary steps forthwith to have dwellings erected for the labouring classes on the ground now vacant in Petticoat-square, in accordance with the provisions of the Artisans' and Labourers' Dwellings Improvement Act, 1875. Mr. Deputy Hora also moved the rescinding of the resolution empowering the Commission to erect dwellings on the Cattle Market at Islington, in place of those removed in Golden-lane and Petticoat-square, and proposed in its place that the necessary steps should be taken to procure the erection of such dwellings on the sites which have been cleared in those localities. An amendment was moved, that the matter be referred to the Finance and Improvement Committee; and after a long discussion this was carried by twenty-six votes to twenty-four.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

KING'S COLLEGE HOSPITAL.

CASES IN MR. LISTER'S WARDS, JANUARY 19.

Strumous Enlargement of Glands of Neck.

Patient, a young, strumous-looking woman, was brought into the operating-theatre. She had been troubled for a considerable time with enlarged glands under the jaw, and a few months before had had some of these removed by operation. Since that time there had been constant discharge from a sinus; and now there could be felt a small hard tumour, which was no doubt the seat of the irritation. The treatment of such cases as this was formerly, Mr. Lister remarked, very unsatisfactory. The best that could be done for the patient was to give cod-liver oil and careful nursing, and to try by general constitutional means to get the patient into a better state of health; the local condition was not interfered with, and the caseous masses or discharging sinuses were left alone. Now, thanks to Professor Faulkner, we had a better method of treatment. In this case he intended to take one of Faulkner's sharp spoons and scrape out the degenerated gland-tissue. He considered this method was a very great advance in surgery, as it enabled the surgeon to completely remove unhealthy tissue, and so relieve the patient of a constant sore and perpetual and annoying discharge. The spoons used were of different sizes: the smaller ones could be used for scraping out sinuses, the larger ones for deeper cavities; they were between sharp and blunt—not too sharp, so as to cut into the healthy tissues with too great facility; but not so blunt but that they might, if carelessly used, go through an artery or a vein. Mr. Lister then proceeded to remove the degenerated gland-mass, first scraping away the superficial blue, undermined skin, and then scooping out the caseous matter bit by bit until the hard lump formed by it had disappeared. The wound was then syringed out with a solution of zinc chloride, a drainage-tube inserted, and the parts dressed antiseptically. Patient was under the influence of chloroform during the operation.

Tumour at the Bend of the Elbow.

A man aged about forty-five years came into the theatre for examination. Just above the elbow, in the front of the right arm, there was a large, somewhat pyramidal swelling, with its base towards the joint. It extended laterally from the internal to the external condyles, and upwards for about four inches. To the touch it was a soft growth, extending down towards the bone. The skin was not at all implicated by it. Patient said that about thirteen years before he had two bad fingers on the inner side of the right hand. At that time there came a small swelling just about the inner condyle of the humerus, and from it to the fingers there could be traced a distinct red line. This small swelling was, he thought, the first of the present tumour. Afterwards he had occasion to do a good deal of heavy work, and was in the habit of resting boxes, etc., upon the affected arm. The swelling had been gradually increasing in size, and lately there was constantly felt an aching pain in it, which was relieved when the arm was kept in a sling. After examining the growth Mr. Lister said it was not possible to say what was exactly its nature, but he would take the man in, and on some other day would make an incision down upon the swelling. It was possible that it might be sarcomatous in nature, but such soft tumours were very often fatty; another thing which complicated the diagnosis was that the history pointed very clearly to some local irritation of a lymphatic gland being the starting-point. In his opinion, however, the growth was not malignant, and it was a case where it might be hoped that an operation would effectually relieve the patient.

Talipes Varus and Equino Varus.

Patient, a lad of about seven years, had been under care for some weeks, and was now in bed. The case was one in which the deformity had not been very great in either foot; it had been operated on, and the parts were kept in proper

*

position by a modification of Scarpa's shoe. In making some remarks on the treatment he had adopted, Mr. Lister said that as he could now make a wound which was for all practical purposes subcutaneous, and at the same time give him plenty of room to work in, he had had no hesitation here in making a longitudinal incision about an inch long in the place where the tendon of the posterior tibial muscle is usually cut. He had then passed his knife into the wound, and, separating the posterior tibial tendon from the surrounding parts, had cut it through towards the bone—not as was usually done, in the subcutaneous method, towards the skin. By so operating he considered that he had the advantage of easily cutting all the fibres of the tendon—not always an easy matter when a patient was under chloroform, and the muscles were all relaxed; and he was also able to avoid all risk of wounding the artery or the nerve in that situation. The boot he used in this case had a sole or foot-piece made of cork, of considerable thickness; about the hollow of the foot the sole was hinged, so as to permit the natural movement of the foot; and to prevent the locking of the ordinary hinge-joint, which was comparatively useless, he had arranged to have a cylindrical joint, and for this purpose had the thick sole made to receive the cylinder in the movement of the foot. The sole was attached to a back-piece, and arrangements by means of pulleys, and anteriorly by means of a strong india-rubber cord, were affixed, by which the foot could be kept in place both laterally and in front. Mr. Lister said he was not altogether satisfied with this apparatus or with Scarpa's shoe for cases of varus and equino varus. Patient was made to get up, and with the shoes on managed to walk very well across the ward floor.

Disease of the Wrist-Joint—Excision.

Patient, an anæmic, strumous-looking young man, had been operated on five days before for disease of the tarsus. It had been scarcely hoped at the time, from the condition of the parts, that the wound would remain antiseptic, but it was now quite sweet. Patient was able to move his thumb and fingers backwards, and had, therefore, the use of his extensor secundi internodii pollicis, and also of the extensors of the fingers. In these operations, Mr. Lister said, he laid special stress upon the necessity of using very early passive motion, and of encouraging patient as much as possible to use his extensors; if this were not done, adhesions were sure to form, and a comparatively useless hand would be the result. The parts were taken down and dressed again under the spray. Mr. Lister made passive motion of all the fingers, and said that he could feel adhesions give way easily now, which, if left alone, would soon have become very difficult to deal with. Another point of interest about these cases was that there was no tendency at all for inflammation to extend up the sheaths of the tendons. This was probably due to the extreme state of relaxation in which all the parts were. In dressing the hand, special care ought also to be given to the position of the thumb, which should be kept well out, as there was a great tendency for it to bend inwards towards the palm, and so lessen the after usefulness of the hand.

Transverse Fracture of the Patella treated by Wire Suture.

Patient was a man who had been in the hospital for about five weeks. He was admitted with transverse fracture of the patella, and Mr. Lister had cut down upon the broken ends and united them by means of strong wire, using, of course, antiseptic precautions. The limb was afterwards put up in an extended position on a back-splint. So far the case had gone on favourably. About two weeks ago the limb had been taken off the splint and forcible flexion made. This was necessary to prevent a stiff joint remaining, and it had given rise to a good deal of pain. The same treatment had been again adopted, and the second time the pain was very slight. It was Mr. Lister's intention to keep the man in bed for seven weeks, and then allow him to get up and go about, when he hoped to have got good bony union of the fragments, and at the same time a sound knee-joint.

Paris Académie de Médecine.—Professors Lister of London and Deroubaix of Brussels have been elected foreign corresponding members.

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Medical Times and Gazette.

SATURDAY, JANUARY 24, 1880.

A NEW UNIVERSITY IN LONDON.

The educational world will probably be somewhat startled to hear that a proposal has been made to have a new University of London. It is not easy to say where the idea originated, but it has taken somewhat definite form in the columns of one of our medical contemporaries, the organ of a powerful association, and is exciting a considerable amount of interest amongst the profession in the metropolis. It appears that the new institution is intended to be an University to which the Schools of Medicine in London (the *non*-medical schools are not mentioned) will be affiliated. The Senate of the University will consist—in part, we suppose—of teachers in the Schools; and the pupils will, as far as we can gather, be the only candidates who will be admitted for its degrees. So far, we find nothing particularly novel in this scheme; and it is not until we come to the principle upon which the new University is to be founded that we discover a satisfactory reason for its proposed existence.

This great principle is the recognition of what is called "respectable capacity and respectable industry." It appears that the London Schools are at this moment so full of young men who are possessed of these commendable qualities that the necessity for a public recognition of their excellence, in the form of a degree, to be granted after a respectable examination, is felt to be urgent. We may be in error (and we freely confess that we are now speaking beyond our information), but we are probably not far wrong when we surmise that amongst the students possessed of respectable capacity the lady-medicals will be included.

Some of us, who may happen, as teachers, to know what the words "capacity" and "industry" mean, or who may be fortunate enough to possess something better than a

"respectable" degree, will be anxious to inquire how this new proposal will affect the University of London. Very considerably, it appears; in a word, the new "University *in* London" is not to be a new foundation, but to be the present University *of* London remodelled and reformed! The reason advanced by the promoters of the generous proposal to popularise thus effectually the degrees of the University of London has been already mentioned. It is that great principle, which appears to have been totally overlooked at Burlington-gardens—the recognition of "respectable capacity and respectable industry." Year after year it is found that the University of London has been supplying the profession of Medicine (and we believe certain other professions as well) with nothing but distinguished men, and that it has obstinately declined to have anything to do with mediocrity, excepting in the way of plucking it. Year after year it has rejected a large proportion of the candidates for its degrees, and exiled from the metropolis "a large number of men belonging to the flower of its medical students," to blossom in the inclement atmosphere of Glasgow, Aberdeen, and Edinburgh! Such a place as this, cry the reformers, "must cease to be an University *in* London, and become the University *of* London, if it maintain any of the claims which its founders had in view."

We have long been accustomed to hear complaints respecting the character and arrangements of some of the examinations of the University of London; but this novel scheme for its reform has certainly taken us by surprise. It seems to have been brought forward at this particular time in consequence of a highly commendable effort that is being made within the University to improve the character of the examination for the degree of Doctor of Medicine, and to increase the frequency of the earlier examinations for the Medical degrees so as to shorten the period which rejected candidates must spend at their studies before they again come forward. Both of these alterations we believe to be steps in the right direction; and we have little doubt but that they will be speedily made. The graduates of the University of London are a sufficiently large, experienced, and liberal body of educated men to be able to maintain the position which their University has always held in the van of the educating and examining institutions of this country. We are sure that they do not despise criticism from without, and that they value every suggestion which may be offered to them in a friendly spirit. But we are convinced that, as the graduates of a great University, they will resist the present proposal to lower the standard for and the value of their degrees. And we do not think that any ill feeling exists, or can easily be excited, on this matter, between the University of London, its sister Universities in Scotland, and the majority of the medical students in London. It is represented that the University of London "claims to be superior to the University of Edinburgh." The graduates of the University of London have, we are sure, too much education and good taste to be guilty of any expression so unworthy of their position, however proud they may be of their University. They believe that the metropolitan students who are "exiled" to Edinburgh, Aberdeen, and Glasgow have an opportunity of obtaining at these Universities degrees of which any Englishman may be proud; and that the percentage of men who are rejected at these Universities is little short of the percentage rejected at London. The graduates of the University of London know better than the promoters of the new scheme what "the founders of the University had in view." It was founded, not for London students, but for persons studying in "the United Kingdom and elsewhere"—*i.e.*, in India and the Colonies,—and its degrees were intended to be conferred, not as a mark of "respectable capacity and industry," but as "distinctions and rewards such as may incline (students) to persevere." But whether or not the University fulfils as well and wisely as might be the intentions of its existence, must be postponed for further consideration.

THE ECONOMICS OF THE CALCUTTA HOSPITALS.

[SECOND NOTICE.]

THE unhappy discussion upon victualling in the Calcutta Hospitals, to which we referred seven months ago,(a) is not yet at an end. The Bengal Government having failed in obtaining the co-operation of Dr. Beatson, the head of the Medical Department, in the introduction of a system of cheap diets, and in the condemnation of the late Superintendents of the principal hospitals for their liberal manner of dieting their patients (always within authorised rates and with the full sanction and approval of preceding Governments), created a new appointment, that of Surgeon-General to the Bengal Government, in the occupancy of which it appears to have been expected that Dr. Irving would fully adopt and carry out the new views of retrenchment. It is, however, shown, in a document now before us,(b) that the new Surgeon-General, while compelled to act upon the restrictive orders of Government, refused to give the support of his professional opinion to a system which, notwithstanding the depreciated value of silver and the rise in prices, cuts down the diet allowances of the sick to about half of those passed by Government, after full inquiry and consideration, in 1870. In his annual report, Dr. Irving characterises the year in which this dangerous experiment was tried as one of "rigid economy," during which "the screw was continuously applied for the purpose of reducing expenditure in all possible ways." The Government designate these as "loose and careless expressions;" but his brother officers, doubtless, recognise in them the honest and fearless scientific opinion of one of the most capable and experienced members of their Service. Disappointed in Dr. Irving, the Government dispense with his services, and take on those of the senior member of the Committee who denounced the old system of liberal supply, and appoint Dr. Payne as their Surgeon-General, thereby deeply offending the whole body of medical officers; as Dr. Payne had, some time previously, declined promotion —which hitherto has never been officially offered twice. Dr. Payne having succeeded in reducing the diet allowance of European lunatics from twelve annas to four annas and six pies (sixpence three farthings) per diem, he may probably succeed in satisfying the Government; but, as we have already suggested, we think it a matter for deep regret that a system condemned by such authorities as Dr. Irving should continue to be practised upon the sick of a great city without being subjected to the test of some absolutely independent opinion, as that of the Military Sanitary Commission. Doubtless the present is a time at which just and wise economy in the administration of every department is of paramount importance in India; but there are many who consider that it is a positive extravagance—in money, not to say in human life—to endeavour to strengthen those who have barely escaped the jaws of death, by feeding them upon cheap grass-fed mutton, condemned as being innutritious by the medical officers, and by dosing them with the country rum of the bazaars, which is a stimulant, but is neither a cordial nor a restorative. No medical man, either in or out of India, can blame the Government for thoroughly investigating the administration of its hospitals with a view to retrenchment; but it is certainly to be regretted that the conduct of this inquiry was entrusted to a Committee the majority of whose medical members were either acting

(a) *Medical Times and Gazette*, May 31, 1879.
(b) "Resolution on the Report of the Calcutta Medical Institutions for the Year 1878."

for or had immediately succeeded the Superintendents whose system was to be animadverted upon; and it is equally to be deplored that the Committee were not satisfied with detecting weak points in the old arrangement, and suggesting reform, but ventured further to charge their absent brother-officers with great laxity of superintendence and management, and with neglect of their public duty while in pursuit of their private practice. Very probably the Bengal Government argued—the recently-appointed Superintendents of the three largest hospitals are peculiarly well fitted to report upon the affairs of those institutions, and we cannot, upon any false notions of delicacy, dispense with their assistance. Let this be granted, but, as witnesses, they might have rendered all needful information, as far as their not very extended opportunities of observation, while officiating in these posts, enabled them to do so, without being forced into the painful and wrong position of sitting in judgment upon the administration of their predecessors and seniors. After a manner which, it is to be feared, is not very unusual in India, the Committee's condemnatory remarks were placed on record, and the report which conveyed them was promulgated to the Service and to the public, before it occurred to the authorities to allow the denounced officers opportunity for reply. One of these officers, Dr. Ewart, late Superintendent of the Presidency General Hospital, has sent us his answer to the published animadversions of the Committee and the Government. In a few spirited sentences, Dr. Ewart not only manfully defends his own position, but makes trenchant onslaught upon his assailants—less in self-assertion than in advocacy of the interests of the sick; arguing that it was scarcely fair that the officer who was acting for him in his appointment should have been selected from the whole Service as his judge; maintaining that the Committee have charged the hospital subordinates with waste, extravagance, pilfering, dishonesty, etc., without adducing any trustworthy proof of the existence of such abuses; and insisting that they have applied a "retrogressive principle" to the administration of the hospitals, as he positively contends that what the Committee stigmatise as waste and extravagance was simply moderate and necessary liberality in the feeding and treatment of the sick.

We trust that our next duty, in regard to this unpleasant controversy, will be that of noticing the report of a body of absolutely independent medical officers, largely experienced in the treatment of the sick in Calcutta; appointed, not for the purpose of uselessly criticising the past administration of men who, at least, have a right to maintain that they acted to the best of their judgment by the authority of the Government, and with the approval of their own official chiefs, but under instructions to report clearly, for the guidance of the Bengal Government, what diets are really needful for those sick, in the interests alike of the Indian Exchequer and of common humanity.

UNSUCCESSFUL INHALATIONS: FAILURE OF SODIUM BENZOATE.

The record of failures is always unpleasant; the record of failures where the experiment was inaugurated with exaggerated hopes doubly so. We regret that the treatment of phthisis by inhalations of sodium benzoate turns out to be a complete failure. The question no longer admits of doubt. There lie before us not only the reports of carefully conducted experiments by Dr. Paul Guttmann and Dr. Wenzel, of Berlin,(a) but also the abstract of a long discussion on the subject at the Berlin Medical Society,(b) in which several other speakers of authority arrived at the same conclusion as the physicians just named, viz., that the benzoate is useless in phthisis.

Dr. Guttmann's experiments may be taken as a sample of the rest, to avoid useless repetition. He treated thirty-one cases in all—twenty-four men, seven women—of ages ranging from seventeen to fifty-six years. Most of them were in advanced stages, those with hectic fever being especially selected; but some few were the subjects of comparatively slight forms of the disease. The temperatures were taken three times daily. The inhalations were carried out, as Rokitansky prescribed, twice a day, with Siegel's spray and a 5 per cent. solution of the benzoate; but the quantity inhaled was, except in three cases, less than that used at Innsbruck, from five to ten grammes of the salt, instead of fifty, being inhaled per diem. Fifteen of the thirty-one patients inhaled for three weeks, one for twenty-two days, six for from fourteen to nineteen days, the remaining nine for three to twelve days. Four of the latter, who were unable to tolerate the inhalation, were treated with twenty grammes of benzoate daily by the mouth. The results may be summed up as follows:—Nine of the thirty-one patients died (seven men and two women), and two were discharged at their own request. No constant effect on the fever could be detected. The patients lost or gained in weight according to the degree of fever present, just as if they were under ordinary treatment. The local symptoms, as proved by auscultation and percussion, remained unaltered or became worse; night-sweats continued as before. In one respect only was any apparent improvement caused by the inhalation; the patients seemed to cough less for some hours after it. Dr. Guttmann, however, ascribes this not to a total diminution of the amount of expectoration got rid of by the cough, but to the fact that they coughed more and expectorated more during the inhalation than at other times, so that the phlegm took longer to reaccumulate. Dr. Guttmann considers that not a single symptom of phthisis in his patients was improved by the benzoate inhalations. On the other hand, several complained of nausea and vomiting, and two had hæmoptysis after it. Dr. Wenzel, too (*loc. cit.*), found that it caused nausea and sickness in some of his patients; and Dr. Waldenburg and Dr. Fritsche made the same complaint in the discussion at the Berlin Medical Society, one of Dr. Fritsche's patients, who not only had lung disease, but also an ulcer on the ventricular bands of the larynx, suffered from diarrhœa, strangury, vomiting, continual cough, and conjunctivitis after the inhalations, and his perspiration smelt strongly of benzoic acid. Dr. Fritsche thinks that absorption was favoured by the laryngeal ulcer. The number of cases, however, in which the benzoate did decided harm is certainly small compared with those in which its effects were negative. It is true that several, not only of Dr. Guttmann's, but of Dr. Wenzel's, patients died during the treatment, but neither of them appears to consider that death was accelerated by the treatment. The cases were so advanced that recovery or improvement *under ordinary circumstances* was hopeless. Dr. Wenzel affirms that "neither in the severe or the slight cases under his care could the least effect on the phthisical process be detected in the way of mere alleviation of the symptoms, still less in that of arrest or objective improvement of the disease." Dr. Fritsche, in eighteen patients, obtained results similar to the foregoing, except that it appeared to him that the inhalation eased the cough and sometimes diminished the expectoration. Dr. Waldenburg in twenty other patients saw "no trace of improvement, subjective or objective," and Professor Senator's experience was the same; in fact, there seems no reason for carrying these experiments any farther. We have for this reason thought it our duty to put our readers as early as possible in possession of the

(a) *Berliner Klin. Wochenschrift*, No. 49, 1879.
(b) *Ibid.*, Nos. 49, 50.

results of the Berlin trials, lest any of them who have followed our previous articles on the subject should be wasting their own and their patients' time with inhalations of a useless drug.

One point in connexion with the subject of inhalation deserves a word here. Several German authorities, and especially Professor Schnitzler, of Vienna, have raised the question again, whether the substances used for spray inhalations reach the lungs at all. Schnitzler thinks most of the spray condenses in the mouth, and that only under peculiarly favourable circumstances does any of it pass the rima glottidis. Professor Waldenburg, however, whose authority is certainly of equal weight, considers that though the quantity which actually reaches the lungs is small, there can be no doubt that *some* does reach them. Professor Drasche of Vienna (*Wiener Med. Wochenschrift*, Nos. 50, 51, 1879), has given what seems a certain experimental proof of this. Making some of his phthisical patients, who were well skilled in inhaling, inhale a sprayed solution of 4·0 grammes ferrocyanide of potassium in 40·0 grammes water for twelve minutes, he found, by testing the interior of the mouth and the sputa every quarter of an hour with weak perchloride of iron, that a time was reached when the iron no longer coloured the mouth or pharynx blue, while the sputa were deeply tinged, owing to the reaction between it and the potassium salt which adhered to them. As in one case the blue tint of sputum occurred as late as eleven hours after the inhalation, it is difficult to see where it could have become impregnated with the ferrocyanide except in the lungs. Putting aside the well-known fact of the penetration of dust into the lungs, it seems unreasonable to doubt that if any part of these organs is permeable to air, the air should not carry with it whatever it holds in suspension at the time.

THE WEEK.

TOPICS OF THE DAY.

The opponents of the Contagious Diseases Acts have of late rather abstained from public demonstrations, but we observe that the fourth annual meeting of the Working Men's National League for the Repeal of the Acts was held last week in the Memorial Hall, Farringdon-street, under the presidency of Mr. Alderman S. C. Hadley. It is stated that there was a large attendance, and delegates were present from Liverpool, Birmingham, Chatham, Maidstone, and other towns. The secretary read the annual report, which, after the fashion of such reports, gave a favourable account of the progress of the agitation for the repeal of the Acts. A discussion of the usual description followed, but the meeting was not unanimous as to whether the repeal of the Acts should be made a test question at the forthcoming general election, the chairman remarking that they did not assume to be a political gathering, but one for removing an oppression and a grievance. It is somewhat singular that almost on the same day that this meeting took place, Deputy Wellman presented a proposition at the annual sessions of the States' Assembly of Jersey for making the provisions of the Contagious Diseases Acts applicable to that island, urging the necessity of the measure from what he had witnessed in his professional capacity. This proposition was seconded by Judge Langlois, a retired surgeon, but the proposal was eventually withdrawn in favour of a motion for referring the question to a committee to prepare a measure having special reference to the island.

At the recent annual meeting of the governors of Dover Hospital, the subject of the restriction imposed upon the Resident Medical Officer, that within two years after his ceasing connexion with the institution he shall not take another appointment or establish himself in private practice in the town, was considered, the present medical officer Dr. England, having asked that the resolution should be rescinded in his favour. The honorary medical staff of the Hospital are opposed to the proposition, and it is stated that they have announced their intention of resigning in a body if the restriction be removed. It was, however, decided, by a vote of twenty to fifteen, to rescind the clause, but that this resolution be enforced only with respect to future appointments. Earl Granville was re-elected President of the Hospital.

It is unsatisfactory to find that, in spite of heavy fines, and even imprisonment, enormous quantities of diseased meat are still exposed in our markets for sale. Dr. Sedgwick Saunders, Medical Officer of Health for the City, recently reported that in the month ending on the 10th inst. twenty-six tons and a half of diseased or putrid meat were condemned. This quantity included the carcases of 1100 sheep, the animals having suffered from "fluke." The greater part of these came from the West of England, especially from Devonshire, the senders being under the impression that the meat was fit for food. At the Guildhall Police-court, last week, a farmer of Frittenden, in Kent, was summoned for sending to the Central Meat Market four quarters of a calf, the same being diseased and unfit for human food. It was stated that the defendant had been cautioned not to send it, but he persisted in doing so. One of the inspectors deposed that he had never seen worse meat; he had been to the defendant's stables, where he saw several other beasts in a bad condition, and some that had died. The defendant asserted that he had eaten some of the meat himself, and found no fault with it. It was proved that some years previously the defendant had been convicted at Maidstone for a similar offence, and Mr. Alderman Stone sentenced him to one month's imprisonment without the option of a fine. We congratulate the magistrates upon their evident determination to deal with this offence with increased severity. We last week recorded the verdict of the Leicester magistrates, who inflicted a penalty of £100 each on the members of a firm engaged in the manufacture of pork-pies, for having in their possession a large quantity of meat unfit for human consumption; and this disgusting and injurious kind of traffic evidently prevails all over the kingdom. It is reported that at Wolverhampton, last week, the sanitary authorities seized, condemned, and destroyed a quantity of American hams and the carcases of some sheep that had died from the rot, all of which were about to be offered for sale for human consumption; and a few days ago a butcher at Glasgow was convicted, having in his shop for sale some beef and sausages unfit for human food.

The reported prevalence of scarlatina at Hounslow Barracks is denied on the authority of Surgeon-Major Anderson, the medical officer in charge there, who states that he has had only seven cases of scarlatina in five weeks, all very mild, and two of them so mild as to be, in fact, doubtful cases of the disease. The disease certainly exists to some extent among the civil population in the neighbourhood, and some of the children of the members of the Militia Permanent Staff are suffering from it; but in no case are there any serious symptoms. We regret to learn that Surgeon-Major Anderson has met with a somewhat serious accident. He was riding out at Hounslow, when his horse became unmanageable and bolted, throwing his rider violently to the ground. When picked up, Dr. Anderson was insensible, and it was found that he was suffering from concussion of the brain and from other injuries. The last reports announced that Dr. Anderson had recovered consciousness. This officer has only recently returned from

service in South Africa, where he was present at the battle of Ulundi.

If the reports of the recent examination of the Eton Volunteer Rifle Corps are correctly given, the St. John's Ambulance Association would appear to be extending their preliminary instruction somewhat beyond the bounds of rough-and-ready assistance to injured persons. We have already spoken of this tendency of the work of the Association, and of the dangerous results likely to arise unless the tendency be always kept in view by both teachers and taught. Some of the following questions submitted to the class which has been under the tuition of Surgeon-Major Baker, of the Grenadier Guards, seem to us to indicate that this tendency is sometimes overlooked:—1. Mention the characteristics by which you would distinguish bleeding to be arterial, venous, or capillary. State the immediate treatment for the arrest of each variety. 2. A Volunteer drops his bayonet, which transfixes his foot. On removing the boot there is copious hæmorrhage from the sole of the foot. State in detail how you would deal with the injury. 3. At football a player falls or is knocked down; he is unconscious. What would lead you to suppose that he was simply stunned, or that he had sustained fracture of the base of the skull with compression of the brain, or that he was in an epileptic fit? What course would you pursue in each case? It is stated that forty-two out of forty-five successfully answered these tests, and that of these thirteen passed with distinction.

A short time since the Coroner for Liverpool publicly expressed an opinion that parents ought to be severely punished for their carelessness in leaving young children by themselves in rooms where they were not protected from the fire by proper fire-guards. The remark was made on the occasion of his holding a number of inquests in one morning on victims to this want of ordinary precaution. We have now to record that, at a series of coroner's investigations held on Monday last at Guy's Hospital on the bodies of young children, Mr. Poland, the Senior House-Surgeon, called attention to the great mortality amongst children arising through the culpable negligence of parents in not providing fire-guards. Mr. W. J. Payne, the coroner, said he had expressed his opinion over and over again, and juries had coincided in his view, that in flagrant cases a coroner should be empowered to inflict a pecuniary fine upon the parents. The Legislature would, he trusted, before long see the necessity for prompt action in this matter.

It is rumoured that in the Bill to be submitted to Parliament during the approaching session, for the taking of the next census, provision will be made for placing the Registrar-General under the superintendence of the Local Government Board. It is also reported that Dr. William Ogle will probably be appointed to succeed Dr. Farr in his department of the Registrar-General's office, a post for which he is undoubtedly well fitted.

The Lord Chancellor has settled the question raised as to the course to be taken with regard to the coronership for East Sussex, held by Mr. Fullagar, who has been sentenced to penal servitude. The Lord Chancellor has removed the late coroner, and has issued his writ for the election of a successor; and Thursday, the 29th inst., has been appointed as the day of election.

THE GILBERT BLANE MEDAL.

The biennial adjudication of the gold medals founded by Sir Gilbert Blane, Bart., Physician-in-Ordinary to George III., has just been made, in accordance with the terms of his bequest, by the Presidents, respectively, of the Royal Colleges of Physicians (Dr. Bennett) and Surgeons (Mr. Luther Holden), and the Director-General of the Medical Department of the Royal Navy (Sir Alexander Armstrong). They have been awarded to Staff-Surgeon Henry Frederick Norbury, C.B., M.R.C.S. Eng., 1860, L.S.A., etc., of H.M.S. *Active*, the author of some valuable contributions to the *Medical Times and Gazette* on "Filaria Medinensis in the Mediterranean," "Fatal Obstruction of the Intestines from Disease of the Pancreas," "On the Use of Vinum Aloes in Ulceration," etc.; and to Staff-Surgeon William Digby Longfield, L.R.C.P.I., 1860, of H.M.S. *Tenedos*. Both these officers have been lately promoted for their services in the recent war in South Africa. The former was Senior Medical Officer with Colonel Pearson's column at Fort Ekowe, for which he was made a Companion of the Bath; and the latter was severely wounded at the battle of Ginghilova.

SIR DOMINIC J. CORRIGAN, BART., M.D.

A slight improvement took place in the condition of Sir Dominic Corrigan at the beginning of the present week. The very cold weather, however, is only too likely to impede his progress towards recovery.

THE MEDICAL DEPARTMENTS OF THE ARMY AND THE NAVY.

An examination of candidates for commissions in the Medical Department of her Majesty's Army, and for commissions in the Medical Service of the Royal Navy, will be held at the University of London on Monday, February 9, and following days. As no new Warrant for the Naval Medical Service has yet been issued, and the authorities show no signs of any real intention of removing the many grievances complained of, candidates for that Service will be wise if they decline the present invitation to present themselves.

THE HEALTH OF KENSINGTON.

It would appear from the report of Dr. Orme Dudfield, the Medical Officer of Health for the Kensington District, that during the month of December last the sanitary condition of that portion of the metropolis was, to say the least, satisfactory, seeing that, after due allowance has been made for increase of population, the births were three, and the deaths twenty-three, below the decennial average in the corresponding month. The deaths were equivalent to an annual rate of 19·6 per 1000 persons living, whilst the average death-rate in the corresponding month of the past ten years was 21·6 per 1000. The effects of the recent cold weather were apparent in an increase in the number of deaths of aged persons, principally from diseases of the respiratory organs; the increase, however, was not considerable, and has not affected the death-rate of the parish, so far as the month of December is concerned. The deaths from the principal zymotic diseases were scarcely more in number than half the corrected decennial average, whooping-cough having proved the most fatal. The present report being the last of the monthly series for 1879, Dr. Dudfield has appended to it, in anticipation of his annual report, a brief summary of the vital statistics of the district for the past year. He observes that it is with considerable satisfaction he is enabled to chronicle a state of affairs far more satisfactory than at the corresponding period last year. The year 1878 had been exceptional, not only for its high general death-rate, but also for the fatal prevalence of certain of the "catching" infantile diseases, so that the zymotic death-rate was also excessive. The year 1877, on the other hand, had been a remarkably healthy one, characterised by the lowest general death-rate on record in Kensington, and by a small zymotic death-rate. He now finds that although the general death-rate in the year 1879 was but little below the decennial average, the zymotic death-rate was fractionally below even that of the exceptional year 1877.

LUNATIC ASYLUMS IN THE COLONY OF VICTORIA.

The annual report of the Inspector of Lunatic Asylums in the Colony of Victoria, for the year 1878, states that on December 31 of that year there were 2672 lunatics in the public asylums, 194 with relatives and friends on probation, and 20 in the licensed house at Cremorne and the lunacy wards of hospitals, giving a total of 2886 registered insane persons on that date. These figures show an increase for the year of 112 under care, and 35 on probation, or a total of 147 on the books of the public asylums, and a decrease of 8 in the licensed houses and lunacy wards. The number of admissions to public asylums during the year was 560. This number, though somewhat less than during several preceding years, is exactly equal to the average during the ten years from 1868 to 1877. The number of patients transferred was 278, and the number of escaped patients who were retaken was 18. These figures show the total admissions to have been 856, and that number added to those in the asylums on January 1, 1877, gives the total number under care in the year as 3575, or 288 more than in 1877. Excluding the numbers transferred and retaken, the report shows that 664 new cases were received for asylum treatment, or a proportion of one in every 1324 of the population of the colony. The ratio in 1877 was one to every 1260 persons, and the last published report of the English Commissioners in Lunacy shows one admission to every 1888 persons of the general population. The number of stated recoveries during the year under notice is 284, equal to 42·77 in each 100 of the admissions. The number of recoveries in English asylums, taken from the last report, was 30·33 per 100 of admissions. The total mortality, calculated on the number under care, was 4·8 per cent. The average weekly cost of maintenance in all the asylums was 13s. 4¼d. for each patient, a reduction upon the previous year of 2½d. per week for each patient.

MUSEUM OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A new and thoroughly revised catalogue of the pathological specimens in the Museum of the Royal College of Surgeons is being prepared by Sir James Paget, the original author of it, with the co-operation of Dr. Goodhart and Mr. Albert Doran. In the course of their work they have found a good many deficiencies in the series, which it is very desirable, if possible, to fill up, so as to make the collection a complete exposition of the principal facts of pathological anatomy which are demonstrable by preserved specimens. Unfortunately the College has none of the facilities for obtaining and selecting specimens that are possessed by museums attached to hospitals, and has therefore to depend entirely upon the contributions of individual members of the profession. The able Conservator of the Museum, Professor Flower, has accordingly appealed to the profession to help him to perfect the series of preparations, and we are sure his appeal will meet with prompt and willing response. The following is a list of the desiderata most required for the completion of the series relating to General Pathology, and to Diseases and Injuries of the Organs of Locomotion:—Bloodvessels enlarged for collateral circulation; parts enlarged or otherwise altered in consequence of nerve-disturbance; parts wasted through excessive use; fatty degeneration of muscles during fever; fatty degeneration of hypertrophied heart; any well-marked colloid degenerations; acute atrophy of liver or other organs; illustrations of healing by grafting; illustrations of inflammatory softening of parts; specimens of elephantiasis mutilans; specimens of noma or cancrum oris; specimens of simple hyperæmia, passive or active; cystic distension of veins or lymphatics; cystic nævus; diffuse fatty growth, *e.g.*, on the nape or under the jaw; nævous fatty tumour; pharyngeal fibrous polypus; painful subcutaneous tumour; keloids of all kinds; arterial angioma (aneurism per anastomosin); lymphatic angioma; fibrous tumours *in* nerves; sarcomata of all kinds, if authenticated or capable of authentication by microscopic examination; cylinder-celled epithelial cancer; clots of blood showing pigmental or calcareous change; clots of blood softened or with suppuration. Atrophy of muscles in infantile paralysis; atrophy of muscles in pseudo-hypertrophy; atrophy of muscles in progressive muscular atrophy; effects of inflammation of muscles; syphilitic gummata in muscles; sloughing and other effects of inflammation of tendons or their sheaths; incomplete fractures ("green-stick" or others); enlarged condyles from cases of genu valgum or the like; elongated and curved tibiæ; soft ribs or other bones from insane persons; inflammatory exudation in bone; bones affected by arsenic; thickening or overgrowth of articular cartilage; any diseases of fasciæ; osteo-myelitis; congenital and infantile syphilis of skull, etc.; puerperal osteophyte of skull; necrosis of epiphyses; joint distended with synovial fluid (hydarthrosis); joints showing effects of acute rheumatism, of pyæmial disease, of exanthematic febrile, or of gonorrhœal disease; capsular (extra-articular) anchylosis; dislocations (recent or old) at wrist or ankle or in hand or foot; anterior curvature (lordosis) of spine; spondylitis deformans; diseases of joints in cases of locomotor ataxy.

THE LATE PROFESSOR BOLL.

The death of Professor Franz Boll at Rome is a great loss to physiology. Few who read his original papers, or his abstracts of Italian scientific essays, in the *Centralblatt der Med. Wissenschaften*, had an idea how young a man he was. Before he had long entered his third decade he was offered and accepted the Chair of Physiology at Rome. He was only thirty-one when he died of rapid phthisis. One of the subjects at which he worked a good deal was the development of the connective tissues. Two years ago his discovery of the "purple of the retina" drew his name into public notice. He was a son-in-law of the late Professor Traube of Berlin.

DR. AIREY'S REPORT ON AN OUTBREAK OF SCARLATINA AT FALLOWFIELD, MANCHESTER.

A sudden outbreak of scarlatina in the village of Fallowfield, three miles south of Manchester, having been reported to the Local Government Board on August 12 last, Dr. Airey was deputed to investigate the causes thereof, and commenced his inquiries on the 16th of that month. His report, which is a very full one, shows that, including nine cases of somewhat doubtful or undeveloped character, there were in all thirty-five persons in eighteen families attacked within a period of one month, and of these thirty-five no fewer than twenty-four were attacked within a space of thirty-six hours between Sunday morning, August 3, and Monday evening, August 4. The symptoms which accompanied the onset of the disease were in many of the cases so remarkable as to lead the medical men who attended them to believe that there must be something exceptional in the cause or mode of infection, the decided opinion being that in all probability the morbific matter had entered the system through the alimentary canal. The outburst of so many cases within so short a space of time pointed to some one common source and act of infection; and suspicion fell at once upon the milk, and on inquiry it was found that every family attacked had received its supply of this article from the same dairy, other families in the neighbourhood dealing with different dairies having entirely escaped. Dr. Airey made careful inquiries in every direction for any other cause of the outbreak, and it was only after prosecuting these researches in vain that he felt

compelled to admit that the milk was responsible. Further inquiry elicited the fact that one of the milkers employed at the suspected dairy lodged at a house where his grandson lay in the peeling stage of scarlet fever, and to this case the whole outbreak appears to be traceable. This was the only case of scarlet fever known to exist in Fallowfield in the latter part of July. The old man vehemently denied that he had been near the child, but it is evident that he must in some way have carried the scarlatinal contagium with him when he proceeded to his milking duties. The theory which appears to offer the most probable explanation of all the facts of this outbreak is that he not only did so, but that probably on one or two previous days the milk had been contaminated in a less degree, whilst on one special occasion (August 3) it was especially contaminated; and that the contents of the milk-can from which the northern group of customers were supplied were on that occasion contaminated in a higher degree than the contents of the other can from which the southern group were served, and thus there was more general spread of fever among the former than among the latter; that this special contamination probably took place at the morning milking on Saturday, August 2, and that the period of incubation in the majority of cases was about forty-eight hours. With only three exceptions the outbreak was developed amongst the families of the better classes, residing for the most part in detached villas, separated by large gardens from their neighbours; and as one instance illustrating the suddenness of the attack and the resemblance of the symptoms to those of irritant poisoning, the case is given of a lady who suffered from violent vomiting and diarrhœa in the night of August 2, having that evening taken some biscuit and a draught of milk for supper. The biscuit at first came under suspicion, until the outbreak of the next few days became known.

THE LIVERPOOL WATER BILL.

Cheltenham has joined the opposition to the Liverpool water-supply scheme. It will be remembered that the object of the Liverpool Corporation Bill is to obtain from the river Vyrnwy and its tributaries, the rivers Avon, Conway, and Marchmont, a supply of water for itself and the neighbouring towns, equal to some 70,000,000 gallons daily. The Water Committee of the Town Council of Cheltenham recommended that a deputation from the Council should join in the deputation from other towns to the Local Government Board, and that the Bill should be petitioned against, the question of further action being postponed. When the adoption of the recommendation was considered by the Council, Alderman the Baron de Ferrières moved, as an amendment, that as the proposed appropriation by Liverpool of water from the upper part of the Severn could have no sensible effect on the comparatively small quantity they were authorised to draw daily from that river at Tewkesbury, it was unnecessary to oppose the Liverpool Bill. The amendment was lost by eight votes to eleven.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.

The third meeting of this Society for the session 1879-80 was held at the Royal Kent Dispensary, Greenwich, on December 5, 1879 (Mr. J. P. Purvis, President, in the chair), when Mr. F. B. Jessett, F.R.C.S.E., of Erith, read a paper on "Fractures, their Pathology and Treatment." After going fully into the pathology of fractures, he discussed at length the various modes of treatment, especially urging the early application of fixed splints in all simple fractures of the long bones, plaster-of-Paris and starch bandages being especially recommended; and in the treatment of compound fractures he recommended the same line of treatment, with trap-doors cut over the wounds for dressing.

PATHOLOGICAL SOCIETY OF LONDON.

We mentioned two weeks ago that the annual report of the Pathological Society of London contained no announcement regarding any proposed special discussion during the present session. At the last meeting of the Society, on the evening of Tuesday, the 20th inst., the President stated that the Council had selected "Rickets" as the subject of the next special discussion, but that the debate would not take place until November of the present year.

NAVAL MEDICAL SUPPLEMENTAL FUND.

At the quarterly meeting of the directors of the Naval Medical Supplemental Fund, on the 13th inst., Dr. H. J. Domville, C.B., Inspector-General, in the chair, the sum of £70 was distributed among the several applicants.

THE DIAGNOSIS OF LATENT SYPHILIS BY CAUTERISATION.

In 1877, Tarnowsky, of St. Petersburg, published the statement that latent syphilis could be discovered in persons who had formerly suffered from the constitutional disease by cauterising small portions of their skin with Ricord's sulphuric acid and charcoal paste. He asserted that in syphilitic individuals a patch five millimetres to one centimetre in diameter, instead of losing its inflamed appearance on the eighth day, as in a healthy person, retained it some days longer, even as late as the twentieth day, and that a syphilitic induration of coppery tint, beginning at and under the periphery of the scab, gradually spread outwards from it in the form of a sharply circumscribed ridge or wall. Lastly, he stated that when the scab fell off it left an ecthymatous ulcer, which gradually cicatrised, the cicatrix having an indulated feel for two or three months, and that the ulcer sometimes took on a slightly serpiginous character, or that papules or pustules in rare cases developed near it, the rest of the body being free from all syphilitic eruption. Although Tarnowsky confessed himself that these phenomena were by no means constant, even in well-attested cases of syphilis, and that he had met with similar results in non-syphilitic patients affected with cancer, phthisis, prurigo senilis, etc., yet he attempted to lay it down as an established fact that this plan of cauterisation could be trusted for the diagnosis of latent syphilis. Professor Köbner of Berlin (*Berliner Klin. Wochenschrift*, December 22, 1879) has, however, lately repeated Tarnowsky's experiments both on syphilitic and non-syphilitic subjects, applying the caustic to the thorax, and not, as Tarnowsky did, to the shoulders, and he entirely denies the accuracy of his statements. He failed to observe any peripheral induration spreading outwards from the scab, though very careful measurements were made daily, nor did the resulting cicatrices differ in appearance in healthy and syphilitic persons. He regards the method as absolutely worthless, as does also Professor Kaposi, of Vienna, after similar trials (*Vierteljahrschrift für Derm. und Syph.*, 1879). Köbner further refutes another statement of Tarnowsky's, that a soft chancre in a syphilitic individual, even years after the primary infection, assumes an indurated appearance like a hard chancre, the induration persisting for some weeks, but not being followed by other symptoms of true syphilis. Köbner appeals not only to his own experience in opposition to Tarnowsky, but to the experience of the many observers who have inoculated syphilitic patients with the matter of soft chancres (Boeck, Sperino, and others), and have never seen Tarnowsky's "pseudo-indurated" chancre occur. He also recalls the well-attested cases of true syphilitic re-infection, in which the second chancre is a true hard chancre and is followed by the ordinary train of syphilitic phenomena.

LIVERPOOL MEDICAL INSTITUTION.

The annual meeting of the Liverpool Medical Institution was held on Tuesday, the 13th inst., when, in accordance with the rules, the following officers were elected. *President:* Mr. Reginald Harrison, F.R.C.S. To complete the number of four *Vice-Presidents:* Dr. Dickinson and Dr. Caton. *Treasurer:* Dr. Macfie Campbell. *General Secretary:* Mr. Rushton Parker, F.R.C.S. *Hon. Librarian:* Dr. Howie. *Members of Council:* Drs. Waters, Barr, and Rawdon, and Messrs. Banks, Ransford, McCheane, and Townson. The number of trustees having by death been reduced to three, it became necessary, according to the provisions of the trust, to elect seven additional members, so as to complete the list of ten—five physicians and five surgeons. The following gentlemen were elected:—Drs. Davidson, Carter, and Glynn, and Messrs. Harrison, Pusey, Banks, and Campbell.

PATHOLOGICAL SOCIETY OF DUBLIN.

At the meeting of this Society on Saturday, January 10 (Dr. Bennett, President, in the chair), Dr. A. W. Foot presented a specimen of aneurism of the ascending portion of the thoracic aorta. The patient, a man aged forty-six, had served in the Army. He suffered from chronic bronchitis. The posterior wall of the sac had somewhat flattened the trachea just at its bifurcation. The sac held about eleven ounces of clot. The tumour had grown downwards and forwards, displacing the heart, and involved the aorta from its origin to the giving off of the left subclavian artery. The remainder of the aorta was eminently atheromatous. Dr. W. G. Smith showed an example of circumscribed gangrene of the lung in a girl aged five years. The affection seemed to be secondary to a gangrenous condition of the bronchial glands. There was miliary tuberculosis of the spleen, liver, lesser omentum, and kidneys (to a slight degree). There was no fluid in the pericardium or pleuræ. The surfaces of the lungs were studded over with miliary tubercles. Extensive consolidation of the lungs was found, but there was no excavation or dilatation of the bronchi. A sloughy cavity lay near the bifurcation of the trachea, and at the root of the right lung there was a circumscribed gangrenous cavity filled with a black slough. Dr. J. M. Finny exhibited a specimen of duro-arachnitis—the inflammation extending from without—from the petrous portion of the temporal bone. A printer, aged thirty-nine, was admitted to hospital, raving, and with other symptoms of meningitis. He died in some thirty hours, comatose, without convulsions. There was pus over the anterior part of the right side of the cerebrum (the fronto-sphenoidal region), limited by the fissure of Sylvius in one direction, and by the falx cerebri in the other. The mastoid cells were broken down into a cavity, and from them the inflammation had no doubt spread, although there was no aperture in, or rupture of, the dura mater. The symptoms—pain, hyperæsthesia, etc.—had reference to disease of the left side. The President showed a specimen of hip disease in a boy aged two years and a half. The usual signs of the disease were wanting during life. There was an enormous abscess around the affected hip. Nature had, as it were, already excised the head of the bone, and the epiphysial centre lay free in the cavity of the abscess. It alone was diseased, and its cartilage had entirely disappeared. The surfaces of the upper end of the bone and of the acetabulum were completely covered by a fully formed membrane. Dr. Barton submitted a portion of the head of the femur which he had excised that morning for hip-joint disease in the case of a girl aged thirteen years. The head of the bone was adherent to the acetabulum. The bone, in its inner and posterior aspects immediately behind the trochanters, was exceedingly carious The cartilage had been completely removed, and there was an opening in the base of the acetabulum, not, however, communicating with the cavity of the pelvis. There was extensive disease about the line of attachment of the epiphyses of the trochanters.

At the meeting of this Society on Saturday, January 17 (Dr. E. H. Bennett, President, in the chair), Mr. Stokes presented an enormous irregular, more or less lobulated tumour, of twelve years' growth, occurring in the abdomen of a woman who had borne three children. The tumour was removed by operation, the patient sinking in forty-nine hours. It measured thirteen inches in its greatest diameter, weighed twenty pounds, and was very vascular. Much of it had a sarcomatous or cancerous appearance, and but little of it had the fibrous appearance of the ordinary uterine tumour (myoma uteri). The President submitted a melanotic tumour from the right orbit. It sprang from the ligamentous connexions of the lower lid, projecting into the orbit, and simulated the familiar forms of tumour which spring from the choroid coat of the eye. It was a typical example of melanotic sarcoma, and was removed without any injury to the globe. Dr. W. G. Smith showed a series of specimens from the body of a gardener, aged fifty-five, who apparently had suffered from progressive pernicious anæmia. His illness dated from the spring of 1879. The chief symptoms were extreme prostration and occasional diarrhœa and vomiting. There was no albumen in the urine. There were distinct and loud blood-murmurs in the veins only. The patient was extraordinarily pallid. The blood, when examined microscopically, presented the characters described in cases of idiopathic anæmia—the red corpuscles being reduced in number, not forming rouleaux, some of them being bowl-shaped, crenated, or tailed. There were numerous retinal hæmorrhages. The heart weighed fifteen ounces; its left ventricle was greatly hypertrophied; the cardiac valves were healthy. There was atheromatous degeneration of the aorta. The lungs were healthy. The spleen weighed eight ounces and three-quarters. The kidneys presented cirrhotic changes to some extent; the right kidney weighed five ounces and three-quarters, the left four ounces and a half; the renal capsules were firmer than usual. The liver was of normal size, and of firm or tough consistence, as though it also had undergone some fibrous transformation. The mesenteric glands presented no abnormality. The microscopical characters of the blood were similar to those noted during life. The medulla of the femur was transformed into a soft, reddish pulp, in which lymphoid cell-elements abounded. An interesting discussion ensued. Drs. Foot and Purser regarded the case as essentially one of Bright's disease—chronic interstitial nephritis. Drs. Head, Finny, and Smith, on the contrary, considered it to be an example of idiopathic pernicious anæmia. The specimens were referred to the committee of reference.

Dr. William Erb, hitherto Extraordinary Professor at Heidelberg, has been elected Professor and Director of the Medical Out-patient Department (*Poliklinik*) at Leipsic.

The Nowell *v.* Williams Case.—The Solicitor-General made application in the Court of Common Pleas, on Saturday last, in the case of Nowell *v.* Williams. He said that the judgment of the Court of Common Pleas upon the application for a rule for a new trial was given on the last day of the last sittings, and the plaintiff was anxious to have the time extended for going to the Court of Appeal as to that part of the rule which referred to misdirection. He added that, twenty-one days having elapsed, he should probably have to get the leave of the Court of Appeal also, but it might be then said that he ought to have got an extension of time from the Common Pleas. Mr. Justice Lopes granted the application, but said that, twenty-one days having expired, the consent of the Court of Appeal should also be obtained.

MEDICAL WORK IN THE CITY OF INDORE.

Indore, which is Holkar's capital, is situated in that portion of the immense Indian Empire which stretches between the river Nurbudda and the chain of Vindyha hills. The political and civil authority of the place, including the general administration of the whole of Central India, is vested in a military officer of considerable standing and experience. Indore is garrisoned by one company of British and four of native infantry. The most important professional duties are entrusted to a gentleman belonging to her Majesty's Indian Medical Service. He has also the administrative charge of a large number of dispensaries in Malwa, and, besides handsome emoluments from his public appointments, has the good fortune to enjoy a lucrative private practice. Amongst his patients are nearly all the native princes and princesses of Central India; whilst he also has the care of the native troops. The small British force, in consequence of the paucity of officers belonging to the Army Medical Department, is bestowed on a gentleman of the sister service. The hygienic arrangements of the cantonment—although there is room for improvement—are, on the whole, in a satisfactory state. The drainage is good, and advantage seems to have been taken of the natural elevations and slopes, and of a river which flows through the place. Here a word of criticism is demanded, and that is, we believe that it is a great pity that mud dams should be thrown up to obstruct the onflow of the stream, and so collect a great depth of water for a somewhat flourishing garden situated on its banks, and for boating. To our mind there appear to be two great objections to this, and both from a health point of view. First, there is a very large surface of stagnant water amidst rank vegetation, which is likely to be a source of malaria, while the undue quantity of moisture in the air causes catarrhal and rheumatic affections; and at the same time a standing body of water is likely to contain contamination in a more or less concentrated condition—for it must be borne in mind that this river is the direct source of supply to the majority of the large population, and indirectly it feeds the wells by percolation. The other objection is that the mud of the dam is gradually washed away, and gets deposited at the bottom, and thereby the river may be rendered shallow. Vegetation is abundant; water plentiful and good in the wells, but doubtful or even impure in the river. The soil is fertile. There are good roads and houses in camp, but we fear the same cannot be said of the native town, to which we shall refer farther on. The barracks and huts for the accommodation of the troops, and the hospitals, are almost all that one would desire. The supply of food is rather above that of an average station, and the prices are fairly moderate; but, owing to the Hindu reverence for the "sacred cow," beef has to be obtained from the neighbouring station Mhow. Vegetables are plentiful; many European kinds, as well as fruits and flowers, seem to thrive well, and the grass for the grazing of cattle—the droppings from which fertilise the soil in return—is better than in most places. But the poor, as a rule, do not show signs of being better nourished than in other parts of the country. On an excursion, for the special purpose of sanitary inspection for one's own private edification, to the native town (which is about six miles distant from the station proper), one cannot but remark the badness of the roads and public thoroughfares, the faulty construction and nearness to one another of the habitations, in spite of the general appearance of wealthiness and industry, the overcrowded streets, the atmosphere charged, even in the open, with dust, moisture, and filth: in fact, with perhaps the exception that the streets are kept swept, the place is in every way most defective sanitarily. If the Prince were to devote some of his surplus revenue to matters pertaining to health, he would be doing himself and his subjects a deal of good. The palace, wherein dwells the Maharajah, is situated *in mediis rebus* of this *au grande complèt* picture of insanitation. In its external aspect it is not unlike a huge Christmas cake—indeed, it resembles a stereoscopic view of this enticingly eatable substance,—whilst sanitarily it is far from making a very favourable impression on the mind. It must not be omitted to mention that on the way to this, in a sort of quadrant, the visitor will notice an excellently finished life-size bust of one of the former Residents (the chief political authority). Farther on, past the royal mansion (!), his attention will be drawn to a beautifully laid out and ornamented garden called the *lall bagh* (red garden); and to it is attached a "Zoo." on a small scale, and amongst other animals will be observed a medium-sized lion, but which unfortunately is in a wretched state of chronic starvation. On casual inquiry it will be learnt that this beast is rationed on only sixteen pounds of meat; *id est*, this *quantum* is allowed, and it may even be questioned whether the unfortunate beast actually gets this. In this garden will be noticed several very elegant pieces of sculpture and other works of art, whereupon considerable sums of money must at one time have been expended, and it is matter for regret that many of them, of upwards of a century's construction, are neglected and allowed to totter to ruins. Standing upon this is a large and lofty mansion, built in three storeys, leading up by narrow staircases, whence a very exquisite view of the garden and the surrounding hills, country, and river can be had. Here there are *durbar* (state) rooms, decorated with pictures, oil-paintings, and busts of the several reigning and deceased native chiefs, Viceroys of India, and local officers. Many of them are magnificent and admirably executed by local native artists, and would probably be gladly accepted for exhibition at Kensington or Paris.

"I take goodness," says Lord Bacon, "in this sense: the affecting of the weal of men, which is that the Grecians call *philanthropia*; and the word humanity, as it is used, is a little too high to express it. Goodness I call the habit, and the goodness of nature the inclination." Now, applying this Baconian maxim to matters medical, any visitor who takes notes mentally of that which catches the eye or the ear or the nose, will find it personified in the management of a very useful temple of Æsculapius in this *locale*. The nature and quantity of good work done by the worthy priest of the god will excite admiration for the Civil Surgeon of Indore, Dr. Beaumont. At first a general sketch of the arrangements of this institution may be attempted, and then a slight glimpse at the genuine work. It is situated on the road to, and about midway between, the camp and the railway station. It consists of a main central building, and three small isolated rows of huts, which latter have been from time to time built as requirements arose, and which are intended for segregating cases, and two of these have separate single rooms. Much credit is due to Dr. Beaumont, for, had it not been for his unceasing exertions, there would probably not have been any hospital here at all.

The central portion of the principal building, which was originally built, consists of five divisions or wards—a central one, having two on each side, with a narrow corridor, intended to keep off the rain and sun, at each of the four ends. For ventilation, in addition to the numerous opposite doors and windows, there are square (about a foot) openings through and through near the floors and roof of the walls, and there are also circular openings about two feet in diameter at the junction of the roof. All these, when kept open, are admirably adapted to insure the purity of the air, and, as they have doors or lids, they can be closed when desirable. Here there are fifty-two beds, and they are all nearly occupied. Great care is taken in the distribution of the sick. In one of the separate buildings cases of bowel complaint are accommodated. Most of these go to hospital when disease has advanced to some extent, and generally as a *dernier ressort*, when unable to work, and so earn a livelihood. They go there, and the Civil Surgeon and his efficient, though small, staff stretch out a benevolent and helping hand to suffering humanity, and not only furnish the people with good food, but, such as it is, appropriate, and attend them until they are cured or die. As there are two Christian missions in the place, we take this opportunity to throw out the hint that some of the convert women might usefully be trained here as nurses. Many, indeed nearly all, of the cases in this ward are suffering from starvation. We learnt, as we would have expected, that few astringents prove equal to controlling the intestinal afflux, and that in those cases in which they succeed better, passive dropsy rapidly supervenes or increases. We had no opportunities of viewing autopsies on these cases; the people are very averse to them. In another building our professional brother and *host*—by which we

mean our clinical and pathological *host*—keeps his better class of patients, and his eye-operation cases. And we must here express our conviction that his ophthalmic practice will compare favourably with that of most surgeons: his dexterity and steadiness of hand and brain will only be excelled by a few specialists. His success—by which he has deservedly earned the *aura popularis*—has been such that patients, poor and rich, travel from all parts to obtain the benefit of his aid and counsel. In the third of these buildings are housed the cases of leprosy, sloughing ulcers, and nose-cuts. There are separate rooms to suit cases. That the penalty which the daughters of Venus pay their paramours for lack of faithfulness, by the loss of the nose, is an outrage by the vindictive perpetrator, there can be no doubt. Whether a preventive measure, by greater rigidity of law, is necessary, is another question; but it will be acceded by all that the nose made by a surgeon cannot compare with that made by nature. Dr. Beaumont, however, performs the plastic operation for making a nose with much neatness, which is the fruit of considerable patience and experience. He cuts the skin on the forehead right down to the bone, brings the gap formed together with horse-hair sutures; and makes the septum after some time, when the newly transplanted skin has taken properly, and the new nose moulded in shape.

While there is a large number of *intern* patients treated in these buildings, several hundreds of people seek and receive relief in the *extern* department. It is astounding how carefully and well all their wants are attended to by Dr. Beaumont's trained assistants and pupils; and we must not omit to note that not a small number of these patients also he sees and prescribes for—be it medicine, surgery, or hygiene—*in propriâ personâ*. The cases which are treated daily under the roof of this establishment between the hours of seven and twelve ante-meridian will afford the most ample and nourishing food for study and reflection to the clinician, the pathologist, the sanitarian, and the journalist. Most of the skin diseases described and figured in the joint work from the able pens of three of our best dermatologists —Drs. Tilbury Fox, Farquhar, and Vandyke Carter ("Skin and other Diseases of India and Hot Climates generally." London: J. and A. Churchill, 1876)—are to be seen under Dr. Beaumont's auspices. At the same time, the dermatologist, like the ophthalmologist, will have no cause to be discontented. No more will the urethral surgeon and lithotritist, the syphilographer pure and simple, nor even the gynæcologist—all will feel deeply grateful for the opportunity for having a peep at this place. As our imperfect sketch is coming to the *omega*, it is but fair to mention the excellent aid which the Civil Surgeon has from his able assistant, Mr. Gunport Sing, who is untiring in his devotion to his duties. The writer of this thanks Dr. Beaumont, Mr. Sing, and others for the courtesy he has received from their hands, and cordially expresses the hope that they may live long in health and vigour and continue their good work.

The time at our disposal, and perhaps the space in this journal, will hardly allow of a description at greater length; but it is from a sentiment both of esteem and admiration at the good work done in the city of Indore that we have essayed this by no means perfect account.

MEDICAL EVIDENCE AT CORONERS' INQUESTS.

The following correspondence, which has passed between the Coroner of Oxford and the Director of Public Prosecutions, has been forwarded to us for publication. The letter from Mr. Maule will be of interest as indicating his standpoint in such matters:—

Oxford, January 12, 1880.

Sir,—As Coroner of this city, and a medical practitioner, I venture respectfully to ask your opinion upon the nature of the medical evidence to be required at an inquest in cases of death by violence.

The only difficulty I have had has been at the Radcliffe Infirmary; and the only persons who have refused to attend as witnesses have been the two Junior Surgeons of the institution. In one case, one of them, after having had notice, failed to attend. The jury did not think his attendance of importance, and they gave a verdict without it. In another case, the Surgeon having failed to attend on a summons, the inquest was adjourned, and he was brought up on a warrant. Under the advice of counsel that the arrest was informal, he threatened legal proceedings. The Managing Governors of the Infirmary took the part of their officers; and one of them wrote to the Secretary of State, soliciting his intervention to hinder me from calling the medical officers in future. A copy of the Secretary of State's letter in reply is inclosed.

In cases where the death has happened from accidental causes, I have no wish to call unnecessary evidence. But, where the information points to violence likely to become the subject of investigation in a criminal court, it seems to me that such evidence ought to be laid before the jury as will be satisfactory to the advisers of the Crown as prosecutors, and not open to censure from the Judge of Assize.

The facts—that the deceased was admitted a patient into the Infirmary on a given day, with certain injuries, and that certain appearances were observed after death—might be given by the House-Surgeon, by a pupil, or perhaps by a nurse.

But, if scientific evidence is required—such as a professional opinion,—it seems to me that it ought to be taken from the Surgeon who had the proper care of the deceased as a patient, the proper officer who himself gave orders for the treatment during life, and who is himself directly answerable to the governors and the public. To take the opinion of the House-Surgeon would be asking a medical man to give a professional opinion on a case which was under the care of another practitioner—a proceeding which is not agreeable to the usages of the medical profession.

It seems to me that the Surgeon himself ought to give the scientific evidence; and that, knowing, as I do, the difference between him and the House-Surgeon, I should be liable to censure from the Judge of Assize if I failed to call the Surgeon himself.

A distinction is to be drawn between cases in the large hospitals in London, and those in the country. In London the House-Surgeon is appointed on the recommendation of the Surgeon. He attends the Surgeon in his visits to the patients, he receives his directions for the treatment, and sees it carried out. He is in full and confidential communication with the Surgeon; and he makes it his business to learn the Surgeon's opinion on the cases under treatment. In case of death, the House-Surgeon is able to say what, in the opinion of the Surgeon, is the cause of death; and, if the jury are willing to receive the Surgeon's opinion at second hand, the House-Surgeon can give it.

It is not so here: and it may happen that the House-Surgeon, if called as a witness, may report an operation, or a course of treatment, which he did not see, did not understand, or did not remember, with his own opinion of the effect of it on the cause of death. It is within my knowledge that such a thing has happened.

I have the honour to be, &c.,

E. L. Hussey.

To the Director of Public Prosecutions,
Home Office, Whitehall.

Craig's-court, Charing Cross, January 14, 1880.

Sir,—In reply to your inquiry as to the nature of the medical evidence to be required at an inquest in cases of death by violence, it will be found in each such inquest to vary materially according to the kind of violence attending and causing the death.

No absolute rule can be applied generally; but, as Coroner and a medical practitioner, you will have experienced the necessity for the exercise of a judicial discretion in summoning medical witnesses acquainted with the facts affecting the death under investigation. The medical witness has, like other witnesses, when summoned, a public duty to perform by attending. The matters on which you comment, relative to the medical officers of the Radcliffe Infirmary, form no exception to this duty.

Your legal powers and course of proceeding are of course familiar to you with respect to medical as well as to other witnesses. It is an incident of the coroner's office, and his duty, to exercise an authority of issuing a summons to compel the appearance of witnesses, and to commit them for contempt should they refuse to appear. His duty is also aided by the provisions of 7 and 8 Vict., ch. 92, sec. 18, granting powers

to coroners to impose fines on witnesses for non-appearance. There is no distinction in carrying out this duty between any classes of witnesses.

With respect to the attendance and remuneration of medical witnesses at coroners' inquests, you can be guided by the express provisions made as to these by the 6 and 7 Will. IV., ch. 89, which statute is modified by Sec. 2 of 7 Will. IV., and 1 Vict., ch. 68.

By acting under and within these several powers of statute and common law, all the difficulties you have mentioned in your letter of the 12th inst. will be met and overcome.

I am, Sir, &c., J. B. Maule, Q.C.

E. L. Hussey, Esq., Coroner, Oxford.

FROM ABROAD.

Typhoid Fever in Children.

Professor A. Jacobi, in a clinical lecture delivered at the Bellevue Hospital (*New York Medical Record*, October 25 and November 1), after adverting to the difficulty which sometimes attends the diagnosis of typhoid fever in children, observed that formerly, when the pathological anatomy of diseases was less studied, it was almost unknown among them, it then being regarded as infantile intermittent and remittent fever. It is only of late years, and especially since the researches of Rokitansky, that we have become accustomed to connect certain symptoms of disease with the anatomical lesions that have produced them, and that it has been found that typhoid fever is not a rare disease in infancy and childhood. First, of typhoid in the *adult* as a term of comparison with its occurrence in children. In the adult a universal chilliness and feeling of uncomfortableness is the premonitory symptom, together with a moderate amount of diarrhœa and some tenderness and gurgling in the region of the ileo-cæcal valve. There is also swelling of the spleen, which may measure from four to seven inches in its longitudinal diameter. About the sixth or seventh day, too, sometimes on the fifth, there is generally found a roseolar eruption over the chest and abdomen, which lasts a week or a little more, and then gradually disappears. There may be hæmorrhage from the bowels in the course of the second or third week, and the affection runs its entire course in twenty or twenty-one days. Now and then relapses occur, so that the patient may pass through two courses of typhoid within six weeks, and even a third relapse may take place. In such cases the ulcerations are not limited to the ileo-cæcal valve, but may be found all along the colon, and frequently in the rectum. In severe cases, and in some epidemics, the course which the temperature pursues is quite characteristic—the gradual increase in the morning and evening temperature. But the statement of the regularity of this elevation has been overdrawn in books, and it is often found wanting in practice.

In *children* from one to six years of age, typhoid fever in a mild form is by no means infrequent, and it may pursue its course with so few prominent symptoms as to excite so little attention that medical advice is not even sought. When parents are more careful, however, the practitioner may find the temperature in the afternoon as high as 102° or 103° F.; while, if the child is seen in the morning, it is apparently well, but the temperature in the rectum, instead of being 100°, is 100⅗° or 101°. When the case is watched from day to day, it may be found that there is no special increase of temperature, and as a rule the child recovers within two or three weeks, this being delayed in some cases to from four to six weeks. In some cases the uneasiness present is complicated by a little diarrhœa, which is usually attributed to various causes; a little tenderness of the abdomen being sometimes, but rarely, present. Enlargement of the spleen rarely occurs, and is detected with difficulty in a child. Pulmonary symptoms, almost always present in the adult, are frequently absent in the child. The roseola, or indeed any of the symptoms, may be absent; and in order to determine the nature of the disease, very accurate observations of the morning and evening temperature will have to be made, and the entire child must be carefully studied in order to enable us to state that there is no pneumonia, meningitis, enteritis, or articular rheumatism present. And as we know typhoid fever may extend over three, four, five, or six weeks, we are able to say that it is a case of this. In some very rare instances the disease has been met with even in the new-born infant.

"Why is it that the symptoms of typhoid are so slight in the child, when certainly children show less resistance to a great many other diseases than is offered in the same diseases by adults? I believe that the chief cause must be looked for in the fact that the principal anatomical lesion cannot be developed to such an extent in the child as in the adult. The glands in the intestinal tract and throughout the body are but slightly developed in infants. Peyer's patches are but small and few in number, and sometimes you will find not more than six or seven altogether. Their physiological function appears to be very limited, and thus it is that the pathological changes taking place in them are but slight. For pathological development is, as a rule, only an overstrained development of physiological function; and therefore I say that as Peyer's patches are but slightly developed anatomically and physiologically, they give rise to but slight inflammation, ulceration, etc., in the child. There is another theory which has been advanced by one of the best men among us—Gerhardt. His opinion is that the poison of typhoid is introduced through the respiratory, or through the digestive organs, especially by drinking-water. Now babies and little children drink but little water, and that little has been generally subjected to boiling, etc., and is in such a condition that the infecting material is developed. Thus infection in infants is less serious than in adults, and in his opinion this is the reason why typhoid is so mild in children."

Among the *complications* that may be met with is *pneumonia*; but this is not usually hypostatic as when met with in typhoid fever in the adult, as children ill with typhoid are not lying down so much as adults. Bronchial catarrh when present in the adult does not usually go on to pneumonia, but the pneumonia of children is usually of the lobular variety, the immediate result of bronchial catarrh, *i.e.*, broncho-pneumonia. Contrary to what happens in the adult, the pneumonia is often developed at an early period of the fever in children; and while the typhoid fever itself is very mild in them, the pneumonia is frequently very severe. We should always be on the look-out for it, and never be satisfied with a single examination. Another complication is *meningeal hyperæmia*. As soon as the functions of the muscles become reduced, especially those of the heart—which is particularly apt to occur in cases in which the fever is high,—and consecutive granular degeneration takes place, less propelling power on the part of the heart is to be expected, and then meningeal hyperæmia is not infrequent in the brain and spinal cord. Now and then such children have a little obtuseness of hearing and slight twitchings. The spinal symptoms, as a rule, are not dangerous. The brain symptoms are dangerous, and, as a rule, they will be developed with the occurrence of a high temperature. It is therefore of the utmost importance to reduce high temperature as speedily as possible. Complication with *diarrhœa* is not frequent, and although now and then seen in bad cases, it is usually absent. Where it is present there is not always ulceration of Peyer's glands, this only being observed in the later weeks. Ulceration of Peyer's glands, however, does not necessarily induce diarrhœa in the adult or the young.

Prognosis.—As a rule, typhoid in children runs a mild course, few cases terminating fatally, and in these few it is usually the complication that causes death, especially by broncho-pneumonia. In private practice the mortality will not be more than one in ten or twenty, and in many epidemics very much less. The mortality in children's hospitals is far higher. In cases in which all the symptoms of adult typhoid fever are developed, the prognosis should be very guarded.

Treatment.—Typhoid fever in childhood is a very manageable disease if taken in time. The danger of a disease which does not produce much anatomical change lies in its duration and the length of the fever. A low fever lasting long will finally become dangerous by producing disintegration of tissue, and by interfering with digestion; but high fever may prove dangerous in a very short time. When the temperature rises to 105° or 106°, fatal convulsions may come on. For the application of cold, the child may be placed in a tepid bath and ice or cold water added until the desired reduction is attained. But for this to be used safely the child

must have vitality enough to establish reaction, the surface beginning to get warm again as soon as the child is wrapped up. "If it does not there is great danger, for as the diminution of the temperature of the body takes place in large part from the skin, if this remains cool and the bloodvessels remain contracted, a very hot blood certainly cannot cool. In such cases, where reaction was not readily established, I have introduced the thermometer into the rectum, and found a high temperature. That condition of things is very dangerous indeed; therefore, after having the child in a cold bath, if reaction was not at once established, I have sometimes reduced the temperature by plunging it into a hot bath, which has the effect of restoring the circulation on the surface of the body, and thus enabling the blood to throw off a part of its heat. In this manner I have seen a temperature of 106° in the rectum reduced within a few minutes to 102° or even lower. You will do well to be especially careful when the feet remain cold after a cold bath. I consider such a case as one that will not bear, or thrive on, the cold-water treatment; and I believe that in such cases you will do better to give up the cold bath entirely. As a rule, in such cases, washing the surface with cold water down as far as the thighs is sufficient." When the reaction is imperfect and the feet do not recover their warmth speedily, cold packing of the trunk only is beneficial, it being retained until both the packing and surface become slightly warm, providing that this does not take more than eight or ten minutes to accomplish, when the pack must be removed before the body becomes quite warm again.

When *quinine* is given in order to reduce the temperature, large doses are required, which should be given in solution. If from eight to fifteen grains daily are required, they should be given in one or two doses; and when the temperature is very high, from twelve to sixteen grains may be given at a dose. The muriate is preferable to the sulphate, as being more soluble. *Salicylic acid* may do much good in the high temperature of typhoid; and salicylate of soda may be given to a child in three- to six-grain doses from three to five times in the twenty-four hours. It will sometimes reduce high temperature when quinine has failed; and when both quinine and salicylic acid have separately failed, surprising results will sometimes be obtained from their combination. *Digitalis* is now and then of use, given in small doses, for the purpose of invigorating the action of the heart; but *veratrum viride*, recommended for this purpose, is highly objectionable. When *stimulants* are required, an ounce of brandy or whisky may be given in the twenty-four hours in milk, water, barley-water, etc.; but in cases where stronger stimuli are indicated, *camphor* is an excellent one, from two to ten grains being administered for a number of days in succession. *Carbonate of ammonia* is a good stimulant, but is so temporary in its effects as to require a frequent repetition. *Musk* is perhaps the most powerful of all stimulants; but when given to a child two years old in a state of collapse, one or two grains are required every hour or two. When an efficient stimulant is required, as much as twenty-five grains may be given in the twenty-four hours. When a speedy effect has to be produced, we must not rely on the stomach of a patient in a state of collapse. In such cases we must resort to hypodermic injections of ether, brandy, alcohol, or camphor dissolved in oil, ether, or brandy—taking care, however, that the solution is not too strong of camphor, or some of this will be left behind in the subcutaneous tissue. When hæmorrhage from ulceration of the bowels occurs—which it rarely does—it may be treated by small doses of opium and alum.

Foreign Bodies in the Ear.—Dr. Seely, of Cincinnati, relating a case in which a "horn-bug," three-quarters of an inch long, remained in the ear fifty-four years, observes that it is a valuable proof of the innocuousness of foreign bodies in the meatus. The injury to the ear in such cases is due to the attempts made at the removal of these bodies. No man is justified in attempting their removal until he has seen them, nor should instruments be used, if at all, unless the ear is illuminated properly during the manipulation. "I have had a number of cases of lacerated and bleeding meatus, the results of attempts at extraction of foreign bodies supposed to be in the meatus. Some of the patients had been from one to three times under the influence of anæsthetics, when an examination revealed the fact that no foreign body was present."—*Louisville Med. News.*

REVIEWS.

A Manual of the Practice of Surgery. By W. Fairlie Clarke, M.D. Oxon., F.R.C.S., late Assistant-Surgeon to Charing-cross Hospital. Third Edition, revised, enlarged, etc. London: Renshaw. Pp. 443.

The acceptability of Dr. Clarke's little work has now been fairly tested, and the present edition is a sure reply as to the result in the eyes of the profession. This is not to be wondered at, for the author is eminently painstaking and careful; he is at all times safe and reliable, whilst he is clear and simple. The work is admirably illustrated for the purpose had in view, which is not elaboration of detail, but accuracy of conception on the part of the reader. We can most justly say that the present edition is a still further improvement on those which have gone before.

Bible Hygiene, or Health Hints. By A Physician. London: Hodder and Stoughton, Paternoster-row. 1879. Pp. 244.

This volume unquestionably shows that the writer of it possesses a considerable and highly creditable amount of industry and erudition; and proves that with the help of that "indispensable key, Cruden's well-known Concordance," he has made a minute search of the Scriptures, the references to which are throughout the book innumerable. But we cannot congratulate him on having attained what he states in his preface to be the first object of the work—viz., "to impart in a popular, easily understood, and *condensed* form (the italics are ours) the elements of the all-important study of hygiene." We should say that the volume contains the hygienic teachings of the Bible, largely diluted with theological and other disquisition and comment. The writer might have profitably taken a hint for himself from the Sacred Book, which he tells us at page 46 of his own work "is the most concise and complete, as it is the most ancient, health-guide in existence." The volume of the "Physician" contains sixteen chapters, the first of which is on "The Bible as a Source of General Information"; and the second consists of general observations on "The Bible as a Health Guide," and treats of such subjects as "Man's Double Nature," "Soul and Body," "Origin of Disease and Death," "God's Special Influence on Health and Life, Disease and Death," and so on; and we do not come actually to the subject of hygiene till after the sixtieth page of the work. The other chapters are headed "Bible Hints regarding Food," Drink, Air, Exercise, Sleep, Cleanliness, Clothing, and so on; and they contain much undoubtedly that is very good. But in looking through the work we note some things that might easily be improved, and some "Bible hints" that seem very far-fetched. In a "popular" work it would have been more useful to give the average amount of food required at each meal, and in circumstances of idleness or labour, in ounces of meat, bread, vegetables, etc., than of nitrogenous and carbonaceous ingredients. It rather provokes a smile to be told that Solomon's prayer, "Feed me with food *convenient* for me" (Proverbs), "clearly indicates the necessity for providing varieties suitable for different idiosyncrasies, ages, sexes, etc., as well as for the different seasons of the year, and the varying changes of climate to which we may be exposed if we change our latitude"; and, again, to be taught that the Apostle's illustration, "Milk for babes, and strong meat for those of full age," is a very important Bible hint regarding infant-feeding! The observations regarding the use of wine seem to us a lengthy piece of special pleading in favour of total abstinence; and surely twenty pages of arguments were not needed to arrive, "on the whole," at such conclusions, among others, as that "habitual abstinence is healthy, and advisable for all whose health can bear it," that "habitual abstinence is especially necessary, and indeed obligatory, for those with whom alcoholic beverages, even in small quantities, disagree or intoxicate," and that "frequent and even occasional intoxication is wrong, and not only a sin against God's moral code, but also against the laws of health." To conclude, the book contains much that is interesting, and a great deal of good and sound advice and instruction, but certainly not in a "condensed form," and, we think, not in one likely to prove "popular," in any extended sense of the term.

Photographic Illustrations of Skin Diseases. By GEORGE HENRY FOX, A.M., M.D., Clinical Professor of Dermatology, Starting Medical College, Columbus, O.; Surgeon to the New York Dispensary, Department of Skin and Venereal Diseases; Fellow of the American Academy of Medicine; Member of the New York Dermatological Society, etc. New York: E. B. Treat, 805, Broadway. 4to. 1879.

PHOTOGRAPHS of diseases of the skin are, as a rule, far from satisfactory, but these "Photographic Illustrations" are very good. Each illustration is the result of a very careful selection both of the case of the disease illustrated and of the photograph of it; and then the photograph is coloured by a skilled artist, who was formerly a physician, and studied diseases of skin under Hebra in the General Hospital at Vienna. We have received the first four parts of the work, each of which contains four plates, the diseases illustrated being Comedo, Acne Vulgaris, Lepra Tuberosa, and Elephantiasis; Keloid, Rosacea, Psoriasis Nummulata, and Ichthyosis Simplex; Fibroma Pendulum, Varicella, Zoster Pectoralis and Lumbalis, and Eczema Universale; and Leucoderma, Chromophytosis, Favus Capitis and Corporis, and Eczema Cruris. All are good, and some are most admirable and excellent, life-like representations of disease. Two pages of text accompany each plate, giving a brief note of the case illustrated, pointing out the diagnostic characters of the disease, its nature and course, and supplying some practical suggestions as to treatment. This part also of the work is concise, clear, simple, and good. We are glad to observe that in all the formulæ given both the metrical and the ordinary system are used. The work is admirably produced, and reflects great credit on both publisher and author. It is to be completed in twelve monthly parts.

TWO BOOKS ON THE RIVIERA.

The Riviera: Sketches of the Health-Resorts of the North Mediterranean Coasts of France and Italy from Hyères to Spezia, etc. By EDWARD I. SPARKS, M.A., B.M. Oxon., etc. J. and A. Churchill. 1879.

San Remo and the Western Riviera, Climatically and Medically considered. By ARTHUR HILL HASSALL, M.D. Lond., etc. Longmans and Co. 1879.

PERHAPS nothing could heighten one's appreciation of the Riviera more than an English January, with its sunless days, and cold and foggy nights, and the incessant and unaccountable fluctuations of temperature. In its way nothing is more remarkable than the apparent apathy with which the vast number of the rich or well-to-do people of this country submit to the miseries of their climate in winter. Everyone knows that under this indifference there is a deep current of discontent, which is constantly coming to the surface in the form of complaints about the weather. Besides that great class which comprehends invalids, convalescents, the delicate, and the infirm, there are thousands of persons in England who, if they but took the trouble to try to appreciate the fact, would be ten times happier on the Riviera during the winter than they are at home. The public appreciation of this fact is, however, rapidly increasing, and there is a corresponding demand for information and thoroughly sound advice upon the subject of warm winter-quarters. Those of our profession who can afford the time and money would do wisely to take a spring instead of an autumn holiday, go to the Mediterannean for recreation, and there learn for themselves something of what they ought experimentally to know about its climate. To those of us who cannot or who will not travel, a good book on the Riviera is now almost a necessity. We are happy to be able to say that either of the two works before us can be recommended for this purpose. Dr. Hassall's name is familiar to all; and his association with the Ventnor Hospital for Consumption is a guarantee of his knowledge of climatology. The readers of this journal are equally familiar with Dr. Sparks's writings upon the same subject, for his present work originated in his articles upon the Riviera which appeared in these pages in 1876-77.

The greatest difficulty felt by our authors, as it seems to us, must have been to decide *whom* they ought to write for. A book on this subject, intended for the profession in England, ought to be replete with every information respecting the climate of the Riviera, the journeys there and back, the life on the coast in its many aspects, and the classes of disease for which the climate appears to be suitable. On the other hand, a work intended for the use of the visitor to the Riviera ought to serve the purpose of a guide in the widest and best sense of the term, and should contain the plainest and strictest rules respecting the mode of life to be pursued by the invalid. In both of the present works the two systems just indicated have been more or less combined, and both may be used either as books of reference at home or as guides for the invalid abroad. The greater part of Dr. Hassall's book is, however, written for the visitor; indeed, the topographical details are in many parts so numerous that it almost descends to the level of an ordinary "Guide." The "Riviera" of Dr. Sparks deals rather with the medical climatology of the South of France—*i.e.*, with the question how far its climatic conditions, as regards temperature, moisture, wind, soil, etc., fulfil the conditions which are rationally indicated for the treatment of the various classes of patients usually sent there; and on this account it will certainly be found the more useful and satisfactory of the two books by the English physician.

Coming now to examine the works in detail, we find that Dr. Hassall's book, as its title implies, is devoted chiefly to San Remo, the account of which and its neighbourhood occupies nearly 200 out of 270 pages. The first two and the sixth chapters contain an account of the topography of the town and its environs, its sanitary arrangements, the native inhabitants, and the food supplies, part of which is given too much in detail to be interesting to a home reader, whilst the style of the writing is frequently little above that of a friendly letter. We might even hazard the guess that Dr. Hassall's visit to San Remo last winter was his first acquaintance with Italian life, when we read how the San Remese women wear gaily-coloured handkerchiefs; how priests and monks are to be seen in the streets; and how, "strange to say, the last day of the Carnival in 1879 was allowed to be celebrated on Sunday"! Chapter III. is devoted to the climate of San Remo, the elements of the climate being thoroughly analysed, such as the winds, the rainfall, and the temperature. The causes of the peculiar geniality of the atmosphere of the whole Riviera are also discussed, and the different parts of the coast are compared, from this point of view, with a few of the principal health-resorts in England. San Remo is put prominently forward in this comparison as a remarkably dry, warm climate; and Dr. Hassall concludes the chapter with the quotation of a number of favourable notices of this place. There are, however, several unfavourable features of San Remo, about which we might fairly have expected to hear more from the author—for instance, its clay soil; the more frequent occurrence of the mistral there than in some spots elsewhere; and especially the want of sufficient shelter on the south-east. Most interesting to the physician is the chapter which deals with the native diseases of the Riviera, and those maladies which may be expected to be beneficially affected by its climate. The directions to invalids are plain, practical, and valuable. Dr. Hassall's advice to extend the season from the beginning of October to the end of May seems to us to be very wise. In the last two chapters, Dr. Hassall attempts to give us a flying account of the other health-resorts of the Western Riviera; but, excepting in the instance of Cannes, he does not appear to have much more personal acquaintance with these parts than is to be acquired in a few days' visit; and most of what there is original in this portion of his book is topographical only. He appears, however, to have discovered something new as a health-resort in Monte Grosso (page 264).

So much for the substance of Dr. Hassall's book, which is very good in many respects. As regards the style of the work, there is too much compilation and too little digestion of the material to permit anything approaching elegance. Neither can the writing be said to exhibit much of the art of description—so important a quality in a work of this nature; and the author is sometimes even less happy in this respect in quoting from other writers. Thus, the "graphic sketch" of San Remo quoted on the second page from Dr. Walshe might serve as an excellent model of bad description.

In the work of Dr. Sparks the health-resorts of the Riviera are fairly and equally described and discussed, no particular town being selected for special notice, as in Dr. Hassall's

book. But before dealing with the characters and merits of its different parts, Dr. Sparks disposes of the all-important question of the value of the climate of the Riviera as a whole. This portion of the work appears to us to be peculiarly valuable to the profession in England, as a thoroughly honest statement of the good and the bad of the Riviera, and a strictly scientific investigation of the applicability of its climate to the treatment of disease—especially of phthisis. On the one side Dr. Sparks ranges the various elements of the climate of the Riviera, including the vegetation, which bears such an important relation to the climate, not only as being an evidence of the character of the latter, but as contributing to its formation. On the other side, Dr. Sparks draws up the most important diseases for which climatic treatment appears to be indicated; and by an acute analysis of their pathology the indications for their rational treatment are discovered. Thus, in the case of phthisis, it is determined that dampness of soil and of atmosphere, large oscillations in the temperature, town life, and over-work, are the main exciting causes of the disease; and the rational indications both for the prophylactic and for the remedial treatment of consumption are accordingly accepted as residence in a climate where the soil is dry, the days sunny, the air pure, fresh, and bracing, fogs unknown, and outdoor life not only possible but most enticing and enjoyable. These conditions have been discovered as the characteristics of the Riviera, and thus the treatment of phthisis by its climate is proved to be, at any rate, rational. The empirical or practical test, which is the safest guide to follow, gives hardly less favourable results. It is found, first, that phthisis is comparatively rare amongst the natives of the coast; and, secondly, that a considerable proportion of the cases sent thither for treatment are benefited either temporarily or permanently. The cases of failure, or the difference between the results as arrived at by the theoretical and practical methods respectively, must represent the disadvantages of the Riviera—the fatigue of travel, the want of home comforts, the temptation to carelessness begotten by the very presence of so many advantages, and many other less powerful influences of a depressing kind. These are all very honestly stated by Dr. Sparks, who especially dwells with great judgment upon the foolish way in which invalids often behave on the Riviera, thinking that their simple presence there will work a miracle, and that they may do as they feel inclined. This portion of the work is done by Dr. Sparks in a very excellent style, and has a character of fairness about it which commends the book to the reader.

The chapter on the journey out and the mode of life on the Riviera is the most valuable one of all to the invalid, and contains just the information which will be required from the physician by invalids before they start. The book contains the opinion and the advice of a man who has travelled much, gone over the ground himself, and lived under the circumstances here described.

We have dwelt at some length on the first part of Dr. Sparks' book, because much of the second part—which deals with the several health-resorts, Hyères, Cannes, Nice, Mentone, Bordighera, San Remo, and other smaller, newer, and less known towns, such as Alassio, Cornegliano, and Spezia—has been already before our readers in these pages. It must be stated, however, that several new chapters have been added, and that more than one of the sketches have been entirely re-written. In every case Dr. Sparks' account of the place is pointed and clear, and gives the reader the impression that it has been written from intimate personal knowledge, as if the author had enjoyed the good and suffered from the bad which he describes with equal fidelity. In this respect his book is much superior to Dr. Hassall's, in which the descriptions of most of the health-resorts—with the exception of San Remo and Cannes—are too frequently superficial, and the impression conveyed such as would be formed by a passing observer rather than by a resident.

At Berlin, Dr. Hirschberg has been made an Extraordinary Professor of Ophthalmology, and Drs. Krönlein and E. Küster Extraordinary Professors of Surgery.

His Royal Highness the Duke of Connaught will preside at the sixty-sixth anniversary dinner of the Royal Hospital for Diseases of the Chest, City-road, to be held at Willis's Rooms on Wednesday, April 21.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

Friday, January 9.

E. H. Greenhow, M.D., F.R.S., President, in the Chair.

(*Concluded from page 79.*)

Case of Acute Rheumatism treated by Salicylic Acid and terminating fatally.

Dr. Goodhart related the case of a girl, aged seventeen, who was under his care in Guy's Hospital. She had been a servant for three years. There was a history of gout and rheumatism on the father's side, but she had always been healthy, except that she suffered from nasal polypi, and had been three times operated upon for that affection; the last time fourteen days before her fatal illness. She had had scarlatina long ago. She dated her fatal illness in some measure to the last operation for the removal of the nasal polypi, after which she felt very faint and weak, though she managed to work on for a week, when, getting up on the morning of the 17th of the month, her ankles, knees, and hips were so stiff that she went to bed again. Her back, shoulders, and arms were soon in the same condition, and the joints began to swell. She had headache and loss of appetite, but no rigors or sweating. She was treated for rheumatic fever, and got better, but relapsed in two days, and then came to the hospital. She was a dark-complexioned girl, with flushed face and bright eyes. Her tongue was red at the edges, with a white fur on the dorsum, and rather dry. The ankles, knees, wrists, and elbows were much swollen, the skin somewhat sodden-looking, and suffused by a pinkish blush. The phalangeal joints were also swollen, and all the joints were immovable from pain. The heart at this time is described thus:—Præcordial dulness increased in extent; apex-beat normal; slight pericardial subsultus at the base. Temperature 103°; pulse 120. Bicarbonate of potash was ordered in half-drachm doses in acetate of ammonia every three hours, with five grains of Dover's powder night and morning. Her diet consisted of three pints of milk. The next day the heart affection was more decided. The area of præcordial dulness was increased upwards to the second intercostal space, across from the sternum to the nipple, and downwards to the sixth costal cartilage. The impulse was in its normal position; the action regular; the sounds were very distant and thick at the base, but there was no bruit. The lungs were normal; the urine 1021, not albuminous. She appeared to have a good deal of præcordial distress. She was sweating freely, and the joints were still painful. The temperature had gradually fallen from 103° to 100°. The alkaline mixture was continued, but at 6 p.m., as she still seemed in much pain, and the temperature was rising again, though very slightly (100·4°), she was ordered fifteen grains of salicylic acid every three hours in its place. She was seen by Dr. Goodhart at 9 p.m., and though still in a good deal of pain, and restless, the pulse was still at 120, and there were no particularly serious symptoms. But after this the pulse became much accelerated, reaching 160, and the patient died quietly and suddenly at 3.45 a.m. She had taken four doses of salicylic acid, sixty grains in all, the last dose three-quarters of an hour before death. She passed a restless, moaning night, but did not seem unusually ill, and she was seen by the sister of the ward, and also by Mr. Reynolds, the House-Physician, at midnight, neither of whom saw any change for the worse. Nor did the nurse notice anything unusual till her death. The inspection was made by Dr. Goodhart the same afternoon. The heart weighed nine ounces and a half; there was considerable eclampsia of the pericardium, and patches of recent lymph in several places; no fluid. The muscular tissue of the ventricle showed one or two points of fatty degeneration, but except these was healthy, and the ventricle was not dilated. The valves were practically healthy, although a grain or two of lymph occupied one or two points upon the mitral. The right ventricle was distended by clots of post-mortem formation, and the pulmonary artery also. The latter had some resemblance to an embolic clot from being double, but it was continuous with the clot in the ventricle, and was of similar appearance; it had, therefore, in all

probability, formed post-mortem. Of the other viscera it need only be said that the small intestine was much ecchymosed and congested, and that the joints all contained abundant yellow synovia, with coagula of yellow lymph, the knees and hips being more particularly affected. All the bones were normal, special search being directed to the sphenoidal, ethmoidal, and frontal sinuses in the region of the recent operation. The first appearance of the patient, her dry skin and her restlessness, augured badly for her recovery, and suggested the possible ouset of hyperpyrexia; and with this prognosis in view the temperature was watched closely for some hours, but finding that it progressively fell, and that the ordinary rheumatic sweating became established, these apprehensions subsided, and the case assumed the characters of an ordinary attack of acute rheumatism of by no means severe type. Sudden death was therefore an unexpected event, and the question submitted for discussion was this: Is the result to be attributed in any degree to the salicylic acid treatment? Dr. Goodhart could not help feeling that this was possible, but he did not wish to press that opinion unduly in the face of facts which rendered the question a very open one. The several issues which seemed to him to be suggested by the case were as follows: First, an early pericarditis was present, and the muscular tissue of the left ventricle was fatty at one or two points. It is therefore possible that what, judged by the examination, was not a severe affection, may yet have been sufficient to determine the cessation of the heart's function in this particular case. Secondly, it might be suggested as just possible that between the time when she was last seen by any skilled assistant and the time of her death, nearly four hours, the temperature might have risen rapidly, and death have occurred from hyperpyrexia. Thirdly, the clot in the pulmonary artery presented unusual features, and suggested undoubtedly the existence of pulmonary embolism. It may have been an error to set aside this view in favour of another. With regard to the first, it was insisted that the pericarditis and muscular change in the heart did not seem sufficient to explain sudden death, and the absence of any dilatation of the ventricle tended to corroborate this conclusion. In the second, the temperature chart was one of almost progressive fall, and therefore in an unlikely condition to rise again rapidly; and thirdly, the similar appearances and the continuousness of the coagula in the right ventricle and the pulmonary artery justified the rejection of any hypothesis of embolism. There then remains to be considered the possibility of death being due to the rheumatic *materies morbi*, or to the sixty grains of salicylic acid which had been administered. In coming to a decision upon that point, Dr. Goodhart confessed himself to be influenced not so much by this one case as by his previous experience. Acute rheumatism is no doubt a very treacherous disease, especially in young adults; but before the introduction of the salicylic acid treatment his post-mortem experience led him to the conclusion that death was associated in some cases with hyperpyrexia without obvious tissue-change; in others with pleuro-pneumonia, pulmonary œdema, and severe cardiac complications; occasionally and comparatively rarely with acute dilatation of the heart. Since the introduction of salicylic acid he had seen three cases where death was sudden, unexpected by the physician in charge, and in which the inspection did not discover any changes in the viscera sufficient to cause death. Was it a coincidence that these cases had occurred since? All the three were girls or young women, and in all it was a first attack. Coming, as this case did, the last of three, determined him to bring it forward, as one, possibly, in which salicylic acid had acted prejudicially in a manner and with a rapidity hitherto unrecognised. This was the more necessary because the mode of death had no special symptoms attaching to it which pointed decidedly to the drug as a harmful agent; and under similar circumstances, supposing that death was caused by the drug, it is quite possible that the ill result might be attributed wrongly to other causes. Death in such cases must, if ascribed to salicylic acid, be attributed to sudden collapse and failure of the heart's action—symptoms known to be produced by salicylic acid,—and some such cases of sudden collapse have already been observed and recorded by others, though perhaps rather in association with a more sudden fall of temperature. Such cases have led to the recommendatiou of caution in the size of the dose of the drug in cases where there should be any sign of a failing heart, or towards the end of an attack. But in the case under consideration there was no such indication for caution; moreover, caution was never overstepped: so that the result, if it be a result, could only be averted, if at all, by commencing with a very small dose and gradually increasing it. Dr. Goodhart thought that, in dealing with a drug which so quickly and so completely saturates the system, which in some cases—and one could hardly foretell when—produces severe nervous symptoms, in others sudden collapse, this is always the wiser plan to adopt, and in many cases the smaller doses seemed to him to be all that are required for the relief of pain.

A Case characterised by Symptoms of Acute Rheumatism which terminated fatally on the Tenth Day.

Dr. Buzzard related this case. The patient was a previously healthy lady, aged forty-two, who got a chill coming out of the opera on July 26, and four days afterwards was taken with shivering "queerness" in her head, noises in her ears, and sleeplessness. When seen by Dr. Buzzard, on August 3, in consultation with her own medical attendant, Mr. Airey, she lay in bed complaining of these symptoms, of deafness in the right ear, and imperfect hearing in the left, with constant nausea and aversion from food. The pulse had been at times as low as 56, and there was much prostration. The temperature was normal; there was no paralysis, diplopia, or change in the fundus oculi; the heart-sounds and breathing were normal. She had never had otorrhœa, and the deafness had only been coincident with her illness. Restorative food and remedies were prescribed. On August 5 a great change had taken place. The temperature was 103° Fahr., the pulse 106; face flushed; left knee-joint swollen, very painful, and powerless. There had been much sweating. Urine acid. Heart-sounds normal. She was ordered fifteen grains of salicylate of soda every three hours. On August 7, Dr. Buzzard found the temperature 99°, the pulse 108, the respirations 38, the heart-sounds normal; the state of the lungs behind could not be ascertained. The swelling of the left knee was considerably reduced, but the right knee was now greatly swollen and painful, and also one of the finger-joints. Careful inquiry and examination failed to discover any wound or sore. There was great prostration. Brandy in frequent doses was prescribed, and the salicylate ordered to be given at longer intervals. The patient sank next day. Dr. Buzzard remarked that he saw the patient upon three occasions. On the first the symptoms were entirely cerebral in character; on the second, although they pointed strongly in the direction of acute rheumatism, yet he could not help a strong feeling that the case was one of pyæmia, the cause of which, however, could not be ascertained. No doubt pyæmia did occasionally occur without any discoverable wound; he had known it happen in connexion with a simple fracture, and in another case from an ulcer of intestine, found after death. In the present case all efforts to procure an autopsy were fruitless. He had not the slightest belief that the salicylate had been of injurious influence, as the patient's condition from the first was exceedingly grave. Not more than twelve doses were taken.

Dr. Bristowe mentioned two cases of sudden death following acute rheumatism in St. Thomas's Hospital. In one of these the patient suddenly fainted, and died. The post-mortem showed the heart to be quite healthy. This took place long before the introduction of the salicylate treatment. In the second case also no salicylate had been administered. Here the post-mortem examination revealed deterioration of the muscular tissue of the heart, there being no other appearances of cardiac disease. He inclined to the belief that Dr. Buzzard's case was one of pyæmia. Within the last few days a patient in St. Thomas's Hospital had died suddenly, in whom the rheumatic odour of the skin, rapid pulse, and acute pain had been noticed. Excision of the shoulder-joint had been performed in this case, and on post-mortem examination pus was found in quantity, together with pericarditis and pulmonary apoplexy.

Mr. Henry Lee thought the cases read to the Society were not examples of acute rheumatism, but of such a kind as usually come within the ken of the surgeon. Frequently some skin eruption was the first indication afforded; and he remembered one case in which scarlet fever was diagnosed, whereas the real evil turned out to be blood-poisoning. He considered Dr. Goodhart's case to be one of blood-poisoning also.

Dr. Henry Green did not consider Dr. Goodhart's notes conclusive. He had spoken of "contracted heart," but this did not necessarily imply no alteration of the cardiac muscular tissue. He (Dr. Green) was of opinion that examination of the tissue after rigor mortis had passed away might reveal considerable muscle-degeneration, notwithstanding the contraction during the temporary rigid condition, and he could not be certain from Dr. Goodhart's description that some such change was not present in his case.

Dr. Glover urged the importance of clearly describing the particular form of the drug employed in these cases —whether salicylic acid or salicylate. He also demurred to the practice of drawing definite inferences from isolated cases. He was glad to hear Dr. Bristowe express a belief that the case reported by Dr. Buzzard was one of pyæmia.

Dr. Maclagan said that salicylate had been largely given in febrile and non-febrile conditions, but bad results attended its employment only in acute rheumatism. He had not, however, experienced results so bad as those encountered by Dr. Goodhart. The question to be decided was, whether the fatal termination in that case must be attributed to the rheumatic poison or the salicylate. He felt that fatalities were more likely to occur under salicylic treatment than during any other. Myocarditis, a common attendant on acute rheumatism, was favoured by endocardiac inflammations. He saw no reason to exclude the fibrous structures of the heart from participation in rheumatic changes, recognising rheumatism of the heart as of the joints. He could not assent to the proposition that salicylates and salicylic acid are identical in action, and could adduce examples in proof. The influence of the poison and the action of the remedy ought to be considered in their relations to one another.

Dr. Mahomed considered Dr. Goodhart's case to be a typical one of acute rheumatism. He had paid much attention to the sounds of the heart in patients recovering from the disease, and he found that the first sound is often absent during convalescence following treatment with salicylate of soda. His experience, however, extended only over the period during which the salicylate had been in general use. Recently, on seeing a case of typhoid for which salicylate was being prescribed, he prophesied that serious evils would attend its use; and in confirmation the pulse went to 160, was thin and flickering, and all the symptoms of impending death from heart-failure supervened. The administration of salicylate having been discontinued, the pulse fell to below 120, and the patient subsequently made a good recovery. He felt certain that one additional dose of the drug would have caused death. He had never seen the first heart-sound undergo the same amount of change in so short a time in fever.

Dr. Barlow inquired whether, in Dr. Buzzard's case, an examination had been made of the tympanic membrane. He thought the case might be one of internal otitis without rupture of the tympanic membrane, and followed by suppuration. The changing situation of effusion did not, he considered, militate against the case being one of pyæmia.

Dr. Down had found salicylate of soda produce depression in many instances, but he had not to record any death through it in his practice. He had often been compelled to discontinue giving salicylic acid, which he administered in large doses repeatedly, but the bad effects he encountered were not noticeable when he employed salicylate of soda. He doubted whether Dr. Goodhart's case was one of true rheumatic fever. In consultation he recently saw a patient, aged twenty-two, who had profuse sweating, with high temperature, but in whom the rheumatic skin-odour was not present. He expressed the opinion that it was not true rheumatism, and the after-history showed him to be right, phlebitis setting in, and ultimate recovery taking place. He insisted on the importance of an accurate diagnosis in such cases.

Dr. Goodhart defended his opinion of the case, and said that a very careful examination of it confirmed him in the belief he had recorded. The patient had been troubled with a nasal polypus, and this led him to look, but in vain, for pyæmic sources. Nevertheless, it might be an instance of obscure blood-poisoning. Replying to Dr. Green, he thought that the heart might fail even when no perceptible structural changes were visible in its tissue. With respect to the varying action of the forms in which the drug under discussion exists, he could find no satisfactory records, the greatest confusion existing thereupon in books, and it was impossible to say anything definite concerning them.

Dr. Buzzard thought Dr. Barlow's suggestion an important one, and deserving consideration. He had inquired at his first visit as to the existence of otorrhœa, but there had been none. He, however, doubted whether otitis would altogether account for the grave cerebral disturbance at first noted, with a very low pulse and a normal temperature. He was disposed to consider the case one of pyæmia, in spite of the obscurity of its causation, and the fact of the strong resemblance of the symptoms to those of acute rheumatism.

Mr. Norton exhibited bones taken from a patient whose case was described to the Society on November 14.

The business of the annual meeting was then proceeded with; after which the Society adjourned.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, January 13.

John E. Erichsen, F.R.C.S., F.R.S., President, in the Chair.

Adjourned Discussion on Eczema of the Nipples and Mammary Cancer.

Mr. Butlin, in commencing the adjourned discussion on Dr. Thin and Mr. Morris's papers "On the Relations of the so-called Eczema of the Nipples to Cancer of the Breast," said that in Dr. Thin's paper two points had to be considered—the nature of the superficial disease, and secondly, that of the deep mischief. He was glad to think that the view held was that the deep-seated disease was carcinoma, tubular or acinous; the superficial was an inflammation where the changes were limited to the epithelium, and not extending to the cutis. Clinically also this local malady was an inflammation, and not a cancer. In one of his own cases it had resembled a psoriasis. In some instances there was a true eczema, with discharge and ulceration; in others there was destruction of the nipple and of the parts surrounding, but this was often due to the remedies used. He had also found proliferation of the epithelium in the ducts, but this hardly threw much light on the process. In most cases the disease was too advanced, and the conclusions drawn by Dr. Thin were rather opposed to common sense. He was inclined to the belief that the superficial was the cause of the deep disease, —not part and parcel of it.

The President remarked that the questions under discussion had a very great and important practical bearing. What was the nature of the superficial disease? Paget, when he first described it, spoke of it as the *so-called* eczema, and they were still in doubt as to its true character. No doubt eczema exists, and that the malady is connected with cancer; but it was not clear whether this was simply inflammatory or something *sui generis*. Certainly it was not of the kind of ordinary skin-cancers, whilst it seemed different from eczema of the common kind. It would be better to give the malady a specific name—none better than "Paget's disease." One great question was, whether this was always the precursor or the antecedent of cancer; it would be of great importance to determine this as regulating early operation. If it was invariably the precursor of cancer, every woman who suffered from it ought to have her breast removed, for if not, the operation would most likely come too late. He thought the profession were scarcely prepared to go this length. Another question arose as to the nature of certain tumours of the breast, small and indolent, commonly called adenoid. Many different kinds of growth were thus described; how far were they latent cancers?

Dr. Thin, before proceeding to reply, read the notes of another case with which he had been favoured by Mr. Reeve Manby. In this instance a woman had been troubled with excoriated nipples, whence sometimes blood flowed, during the nursing of two children. Ultimately a tumour developed, which was removed, and turned out to be similar to those described. He thought he had shown that all cases of eczema of the nipple were connected with a form of cancer which was not scirrhus, which travelled down the ducts to the acini, and thence spread; whereas the true scirrhus always began in the acini. This form of cancer was not so rapidly fatal as scirrhus; hence operation was more likely to be successful. The superficial malady was not a simple inflammation; the lesion would not heal, though there was nothing

local to prevent it from doing so. The diagnosis between this disease and ordinary eczema was all-important as affecting operation.

Mr. Morris compared the malady with ichthyosis of the tongue. It seemed a special disease, and the term "Paget's disease" appeared a very appropriate one. It was always limited to the nipple and areola. The surface was thickened, though he could not say that it presented any special appearances. It might occur in women who were either suckling or pregnant. All admitted the similarity of the changes in the skin, ducts, and acini; the only difference was as to the order of these and the name. He would be inclined to limit the term "cancer" to the later stages. He would hesitate to say that all cases of eczema of the nipple were necessarily followed by cancer, though it might be so if the patient lived long enough. Ichthyosis of the tongue might last over two years and not be followed by cancer; and he knew of one case at least where the eczema seemed cured. The best indication for operation was the existence of small diffused hard masses in the breast.

Two Cases of Direct Dislocation Backwards with Fracture of the Rim of the Acetabulum.

Mr. F. S. Eve described two cases of the above injury, and made some remarks on the mode of production of dislocations backwards, as follows:—*Case* 1. A middle-aged man threw himself from an upper storey window, and, in addition to fatal injuries to the head, sustained a sciatic dislocation of the right femur, which presented the usual appearances. On dissection the head of the femur was found on a level with the lesser sciatic notch. The tendon of the obturator internus crossed the upper part of the articular surface, binding the head tightly down, and thus occasioning extreme rigidity of the limb. The posterior portion of the rim of the acetabulum was torn up. Only the posterior segment of the capsule was lacerated. Of the muscles, the gemellus inferior alone was torn. After the dissection was completed, the femur was readily reduced through the cotyloid notch. *Case* 2. A man, aged fifty-five, had his left femur dislocated in the neighbourhood of the great sciatic notch, by a fall of earth upon his back while he was stooping at work. The dislocation presented no unusual characters. Reduction was effected by traction on the slightly flexed and adducted thigh, the ordinary manipulation having failed. He died from a rupture of the intestines. On dissection the head of the femur was found to have passed through the posterior portion of the capsule on a level with the great sciatic notch, and apparently above the obturator internus. The posterior portion of the rim of the acetabulum was torn up as in the first case. The pyriformis, gemellus superior, and obturator externus were lacerated. *Remarks:* The cases to some extent support Mr. Morris's view, "that direct dorsal dislocations are always associated with fracture of the acetabulum, or head of the femur, or both." In order to ascertain the absolute correctness of this statement, the author tabulated all the dislocations backwards in the London museums, with the following results:—Direct dislocations, 8; indirect, 1. A dislocation is described as direct when the head of the femur passes directly backwards through the posterior portion of the capsule; indirect, when by abduction it passes out through the cotyloid notch and is drawn backwards by inversion. In three of the eight dislocations there was no fracture of the posterior portion of the acetabulum, in four the acetabulum was fractured, and in the remaining case the head of the femur was fractured. Cases of direct dislocation with fracture of the acetabulum appear from the table and records of cases to be comparatively common. Various considerations as to the position in which the two forms of dislocation mentioned occurred, rendered it probable that the indirect did not so greatly preponderate in frequency as Mr. Morris maintained. The author found by experiment that the head of the femur could, by manipulation in direct dislocations "above the tendon," be returned to the socket through the opening in the capsule by which it escaped, if in circumduction the thigh was somewhat widely abducted. Therefore the reduction of a direct dislocation by the ordinary manipulation "would not be difficult and destructive." The untorn inferior portion of the capsule further did not obstruct reduction through the cotyloid notch after division of the obturator tendon. A direct dislocation could not be produced experimentally, because it was impossible to apply sufficient force in the right manner. For example: in falling from a height on the outer side of the knee, the thigh would be adducted, and the weight of the falling body thrown in an opposite direction; thus a great strain would be brought to bear on the posterior portion of the capsule, which would either be torn from the acetabulum, or tear up the margin with it. With regard to the cases first related, in one the dislocation was above the tendon, in the other beneath and below it. Mr. Wormald's and Mr. Wm. Adams' cases were also instances of direct dislocation below the tendon. The distinction is important owing to some difference in reduction. In dislocation "above the tendon" reduction was effected either by manipulation, or, if the acetabulum were fractured, more easily by extension, through the opening in the capsule by which it escaped. In dislocation "below the tendon" the femur could be reduced through the cotyloid notch, as in indirect. The principal conclusions arrived at may be stated as follows:—(*a*) That direct dislocation backwards does occur without fracture of the acetabulum; (*b*) it is probable that direct dislocation backwards is comparatively common; (*c*) that a direct dislocation "above the tendon" can be reduced by manipulation through the opening in the capsule by which the head of the femur escaped; (*d*) that the untorn inferior portion of the capsule is no obstacle to reduction.

Mr. Morris said that when his paper on the subject was read before the Society, Mr. Willett had remarked that the doctrines then advanced were those commonly taught at St. Bartholomew's Hospital; but the paper now given to the Society by Mr. Eve seemed to imply something different. All subsequent investigations he had made seemed to enforce his own views, and Mr. Eve's paper most of all. The specimens recorded as to be found in the various London museums, where there was this dislocation without fracture, were, first, Mr. Wormald's, which was described as downwards and backwards. In reality this was indirect. The second specimen was a dry one at St. George's Hospital, which, carefully examined, went to support his views. The third was Mr. Mac Cormac's, at St. Thomas's Hospital. Here the description given did not correspond with the exact state of matters; and it, too, went to support his views. There had been a double dislocation, and in the case of the lower the bone had afterwards changed its position. In all of these instances death had followed the injury or its accompaniments; but this was not the rule in the vast number of instances.

Mr. Eve having replied, the meeting adjourned.

The *Stirling Journal and Advertiser* reports that Dr. James Macnab, of Stirling, has been appointed Certifying Surgeon under the Factory and Workshops Act, 1878, for the Stirling district, in the place of Dr. Andrew Beath, deceased.

The Canal-Boats Act.—At the Marylebone Police-court, last week, ten summonses under the Canal-Boats Act were heard against persons for unlawfully permitting boats to be used as dwellings on the Grand Junction Canal, Paddington Basin, contrary to the provisions of the Act. The cases were proved by Dr. Stevenson, Medical Officer of Health for Paddington, and the Sanitary Inspector. The magistrate inflicted fines varying from 5s. to 10s., with costs, in each case.

Meteorology and the Growth of Trees.—From our contemporary *Nature* we learn that at the meeting of the Botanical Society of Edinburgh, on the 8th inst., Sir Robert Christison read a paper of much interest and importance on the relative growth of trees during 1879 as compared with 1878. Sir Robert began, about two years ago, a system which, as it is his, is, we need not say, accurate enough for its scientific purpose of measuring the girths of a large number of well-grown trees in and about Edinburgh. References to the daily maximum temperatures, noted at the Edinburgh station of the Scottish Meteorological Society, showed that for the six months ending September the mean for 1879 was fully 5° less than that for 1878, and the deficiency of day temperature amounted to nearly 10°. Of eleven deciduous trees, exclusive of oaks, the deficiency of growth during 1879, as compared with 1878, was 41 per cent.; of seventeen evergreens of the pine tribe the deficiency was 20 per cent.; and of seven oaks the deficiency was 10 per cent. The seven oaks were of different species, but they all gave results closely agreeing with each other.

OBITUARY.

CHARLES BENSON, M.D. Dub., F.R.C.S.I.

Another veteran has fallen out of the ranks of the profession. Suddenly, on the morning of Wednesday, the 21st inst., Dr. Charles Benson passed away in the eighty-third year of his age, respected and beloved by all who knew and valued him as a friend. Last Tuesday Dr. Benson took outdoor exercise in his usual health, and his fatal illness seems to have lasted only a few minutes.

Dr. Benson was the Senior Fellow of the Royal College of Surgeons in Ireland, having been a "Member" (as the Fellows were originally called) of the College since 1825. In 1840 he became a Doctor of Medicine of the University of Dublin, in which he had already taken the degrees of A.M. and M.B. in 1822. He was in due time elected President of the Royal College of Surgeons, and for many years he filled the chair of Practice of Medicine in the school attached to that corporation. He was Physician to the City of Dublin Hospital until a few years ago, when failing eyesight obliged him to retire from his professional appointments. On his resignation of the Clinical Physicianship he was made Consulting Physician to the Hospital, in which he took an intelligent and deep interest to the last day of his life. He was one of the Honorary Secretaries of the Surgical Society of Ireland.

In the earlier part of his career Dr. Benson was an original and clever writer. To Todd's "Cyclopædia of Anatomy" he contributed articles on "The Axilla," "Bone," "Normal Anatomy," and "The Diaphragm." In the *Dublin Medical Press* he published a course of lectures on the "Diseases of the Digestive Organs" during the years 1840-42; and to Costello's "Cyclopædia of Practical Surgery" he contributed an article on "Auscultation." He was also at one time a frequent contributor to the *Dublin Journal of Medical Science* and to the *Medical Press*.

MEDICAL NEWS.

Royal College of Surgeons of England.—The following gentlemen passed their Primary Examination in Anatomy and Physiology at a meeting of the Board of Examiners on the 15th inst., and when eligible will be admitted to the Pass Examination, viz.:—

Breach, James H., student of King's College Hospital.
Coutts, John A., of St. George's Hospital.
Flaxman, Americ E., of the Middlesex Hospital.
Gravely, Harry, of University College Hospital.
Growse, William, of Guy's Hospital.
Hill, William J., of St. Bartholomew's Hospital.
Humphery, Francis W., of St. George's Hospital.
McDougall, Herbert A. H., of King's College Hospital.
Mattei, Edward, of St. Thomas's Hospital.
Short, James J., of King's College Hospital.
Wright, Richard S., of St. Mary's Hospital.

Sixty-three candidates out of the 140 examined having failed to acquit themselves to the satisfaction of the Board of Examiners, were referred to their anatomical and physiological studies for three months, including nine who had an additional three months. With this meeting the Primary Examinations were brought to a close.

The following gentlemen, having undergone the necessary examinations for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 19th inst.:—

Bothamley, Wm. P., Donnington, Spalding, student of Guy's Hospital.
Davis, Arthur R., Langport, Somerset, of the Middlesex Hospital.
Fagg, Thomas W., Alkham, Dover, of St. Bartholomew's Hospital.
Favell, Richard, Sheffield, of St. Bartholomew's Hospital.
Greensill, Joseph M., Witley, Starport, of the Middlesex Hospital.
Heaven, John C., Bristol, of the Bristol School.
Heygate, Frederick N., West Haddon, of St. Thomas's Hospital.
Irvin, Joseph Henry, Preston, of the Manchester School.
Mulroney, Thomas R., Bombay, of the Bombay School.
Pegge, William J., Newton Heath, of the Manchester School.
Scale, Thomas W., Aberdare, of the Middlesex Hospital.
Todd, George D., Leeds, of the Leeds School.
Webb, William W., Uxbridge, of the Charing-cross Hospital.
Wigg, Alfred E., Adelaide, S. Australia, of University College Hospital.
Williams, William, Aberdare, of St. Thomas's Hospital.
Wood, James, Wigan, of the Manchester School.

Eight candidates were rejected. The following gentlemen were admitted on the 20th inst., viz.:—

Allen, F. E., Upton-on-Severn, student of St. Bartholomew's Hospital.
Armitage, J., Springfield-road, N.W., of St. Bartholomew's Hospital.
Boulter, Walter E., Manchester, of the Manchester School.
Brooke, George A. G., Kennington-park, S.E., of the Manchester School.
Chipperfield, Thos. J. B. P., Twickenham, of St. Bartholomew's Hospital.
Fowler, Charles H., East Kirby, of St. Bartholomew's Hospital.
Hagyard, Robert, Leeds, of the Leeds School.
Jones, William H. F., Euston-road, of the London Hospital.
Lewis, George S., Hobart Town, of Guy's Hospital.
McKee, Gerard M. E., Hammersmith, of St. Bartholomew's Hospital.
Mead, Charles, Falmouth, of St. Bartholomew's Hospital.
Oglesby, Joseph W., York, of the Leeds School.
Parish, Frank, Erith, of University College Hospital.
Reynolds, James J., Appledore, Devon, of Guy's Hospital.
Rich, Evelyn A., Winchester, of St. George's Hospital.
Richardson, James N., Leeds, of the Leeds School.
Roberts, Oswald, Richmond, Yorkshire, of St. Thomas's Hospital.
Theed, Stanley E., St. Ives, of Guy's Hospital.
Warren, Henry G. L., Orange, N.S.W., of St. Bartholomew's Hospital.
Webber, William W., Crewkerne, of St. Thomas's Hospital.
Whitehouse, John, Birmingham, of University College Hospital.
Withers, Oliver, Sale, Lancashire, of the Manchester School.

Ten candidates were rejected. The following passed on the 21st inst., viz.:—

Back, A. H., Hethersett, Norfolk, student of St. Bartholomew's Hospital
Bartlett, Charles R., Cheltenham, of St. George's Hospital.
Bates, Henry L., Streatham, of Guy's Hospital.
Beresford, Charles W., Buxton, of University College Hospital.
Biss, Cecil Y., Sydenham, of St. Bartholomew's Hospital.
Breeso, Thomas T., Norwich, of University College Hospital.
Cree, Edward R., St. John's-park, N., of the Middlesex Hospital.
David, William W., Cymer, South Wales, of Guy's Hospital.
Dixon, Harry A., Burnley, Lancashire, of the Manchester School.
Evans, Ebenezer D., Wrexham, of University College Hospital.
Groom, Henry T., Camden-road, of St. Bartholomew's Hospital.
Harvey, Sidney F., Clapham-road, of St. Thomas's Hospital.
Hebbert, Charles A., Birmingham, of the Westminster Hospital.
Hormazdji, Robert Nesbit, Bayswater, of St. Mary's Hospital.
Hunt, Vere E., Cromwell-crescent, of St. George's Hospital.
Knipe, Francis A. P., Malvern, of Guy's Hospital.
Little, Ernest M., Park-street, W., of St. George's Hospital.
Mort, Robert B., Southport, of St. Bartholomew's Hospital.
Shorland, Walter E., Bristol, of the Bristol School.
Smith, Frederick M. G., Farnham, Hants, of Guy's Hospital,
Swale, Harold, Guildford, of St. Thomas's Hospital.
White, William H., Carshalton, of Guy's Hospital.
Wightwick, Fallon P., Folkestone, of the Middlesex Hospital.

Six candidates were rejected.

The following were the questions on Surgical Anatomy and the Principles and Practice of Surgery submitted to the candidates at the written examination for the diploma of membership of the Royal College of Surgeons on the 16th inst., when they were required to answer at least four (including one of the first two) out of the six questions, viz.:—
1. Describe the several structures which must be divided in an amputation of the thumb and its metacarpal bone. 2. Describe the course, relations, and anastomoses of the deep epigastric artery. 3. What is a node? Give the anatomical characters of its various forms, and the treatment you would adopt in each case. 4. Describe the defects of vision which may exist, unconnected with disease. Explain their causes, and state how they should be remedied. 5. Mention the causes of perineal abscess, its symptoms, course, and treatment. 6. Mention the various injuries which produce —(1) lengthening, (2) shortening of the lower extremity. The following were the questions on the Principles and Practice of Medicine submitted to the candidates on the 17th instant, viz.:—1. What conditions give rise to fluid in the pleural cavity; of what kinds may it be, and what are the signs which indicate the presence of each kind? What treatment should be pursued in different circumstances? 2. What are the chief modes by which mechanical obstruction of the bowel is produced, the symptoms proper to, and the treatment to be adopted in each? 3. What are the uses and doses of the following drugs?—Salicylate of soda, acetate of ammonia, liquor arsenicalis, sulphate of potash, vinum antimoniale, infusion and tincture of digitalis, sulphate of zinc, liquor potassæ, subnitrate of bismuth, extract and tincture of stramonium, calomel, and hydrargyrum c. cretâ.

BIRTHS.

Cable.—On January 19, at Royal-hill, Greenwich, the wife of G. H. Cable, M.R.C.S., of a daughter.

Davson.—On January 15, at Mount Galpine, Dartmouth, the wife of F. Adams Davson, M.D., of a son.

Jackson.—On January 18, at 13, Ladbroke-grove, W., the wife of Robert Alex. Jackson, L.R.C.P., M.R.C.S., of a son.

Karop.—On January 5, at 198, Holland-road, W., the wife of George C. Karop, M.R.C.S., of a son.

Sheldon.—On January 19, at 123, Cornwall-road, Notting-hill, the wife of Thomas Sheldon, M.D., of a daughter.

MARRIAGES.

O'Brien—Banister.—On January 14, at Cheltenham, Henry O'Brien, Surgeon-Major A.M.D., to Ethel Bessie, second daughter of Henry Banister, Esq., of Cheltenham.

Rendall—Kilburn.—On January 15, at Hanover-square, John Rendall, F.R.C.S., of Lymington, Hants, to Margaret, widow of F. Kilburn, Esq., formerly of Calcutta.

Ricketts—Hoffmeister.—On January 15, at West Cowes, Isle of Wight, Henry Wyndham Ricketts, Lieutenant 56th (Pompadours) Regiment, to Georgina Kilderbee, daughter of W. C. Hoffmeister, M.D., of Clifton House, West Cowes, Surgeon to the Queen.

Strathy—Grant.—On January 15, at Alford, N.B., Frederick R. Lee Strathy, M.D., M.R.C.P., of Harborne, Birmingham, to Mary, youngest daughter of D. R. Lyall Grant, of Kingsford, Alford, Aberdeenshire.

DEATHS.

Beecroft, Samuel, F.R.C.S., at Hyde, Cheshire, on January 12, aged 59.

Belemore, Gwladys Marguerite, daughter of Surgeon-Major A. J. Belemore, A M.D., at Pembroke Docks, South Wales, on January 13, aged five months and six days.

Corbin, Margaret Lukis, second daughter of M. A. Bazille Corbin, F.R.C.S., Saumarez-street, Guernsey, on January 14.

Key, Thomas, late Superintending Surgeon, Madras Army, at Edinburgh, on January 18.

Lycett, Mary Anne, wife of John Lycett, M.D., at Scarborough, on January 18, aged 72.

Osmond, Thomas Edward, M.R.C.S., at Thorpe-le-Soken, on January 9, in his 70th year.

Taylor, Anne Elizabeth, wife of William Taylor, M.D., at Liverpool, on January 16, in her 57th year.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

Brighton and Hove Dispensary.—Resident House-Surgeon. Candidates must be members of one of the Royal Colleges of Surgeons of Great Britain or Ireland, and licentiates of the Royal College of Physicians, or of the Society of Apothecaries, London, and registered under the Medical Act. Applications, with testimonials, are to be sent to the Chairman of the Committee of Management, Brighton and Hove Dispensary, Queen's-road, Brighton, on or before Monday, February 2.

City of Dublin Hospital.—House-Surgeon. Candidates must be duly registered. For further particulars apply to Dr. Wheeler, 27, Lower Fitzwilliam-street, or to the Hospital. Applications to be sent to the Secretary of the Medical Board, City of Dublin Hospital, not later than January 26.

Evelina Hospital for Sick Children, Southwark-bridge-road.—Registrar and Chloroformist. Candidates must possess a recognised qualification. Applications, with testimonials, to be sent to the Committee of Management at the Hospital not later than February 5.

Liverpool Dispensaries.—Assistant Resident House-Surgeon. Candidates must be unmarried and duly qualified. Applications, with testimonials and registration certificates, to be sent to the Secretary, Leith Offices, 34, Moorfields, Liverpool, on or before January 29.

London Fever Hospital.—Physician and Assistant-Physician. Candidates must be either Fellows or Members of the Royal College of Physicians, London. Applications, with testimonials, to be sent to the Secretary at the Hospital, Liverpool-road, Islington, not later than February 7.

Middlesex County Lunatic Asylum, Colney Hatch (Female Department).—Assistant Medical Officer. Candidates must be duly qualified and registered, unmarried, and not less than twenty-five or more than thirty-two years. Applications (to be made on a printed form, which can be obtained of the Medical Superintendent), are to be sent in, with not more than three testimonials of recent date, to Mr. S. S. Skaife, Clerk, Middlesex County Lunatic Asylum, Colney Hatch, not later than January 27.

Sunderland and Bishopwearmouth Infirmary.—Physician. Candidates must possess the degree of Doctor in Medicine of some University of the United Kingdom, and be registered accordingly, and are not to undertake to practise in surgery or midwifery. Applications, with testimonials, to be sent to the Secretary, John Kitts, Esq., on or before January 28.

UNION AND PAROCHIAL MEDICAL SERVICE.

APPOINTMENTS.

Barton Regis Union.—Walter R. T. Hawkins, M.R.C.S. Eng., L.S.A., to the South District.

Newcastle-under-Lyme.—Frank Clowes, D.Sc. Lond., as Analyst for the Borough.

Scarborough Union.—Wm. C. E. Taylor, M.R.C.S. Eng., L.R.C.P. Edin., L.S.A., to the Workhouse.

Shardlow Union.—William M. Knipe, M.R.C.S. Eng., L.S.A., to the Melbourne District.

West Ham Union.—Alfred E. Kennedy, L.R.C.P. Lond., L.S.A., L.F.P.&S. Glasg., to the Plaistow District.

By the recent changes of the Local Government Board Dr. Stevens has had conferred upon him the chief control of matters relating to vaccination.

Scarlet fever and measles are stated to be very prevalent in some parts of West Middlesex and South Bucks, and in consequence of the former disease the Langley School Board have decided to keep the public schools closed until February 9 next.

In the vomiting of pregnancy, Dr. Herzberg, of Berlin, recommends chloral hydrate in the following form:—℞. Chloral 1·5 grammes, aq. dest. 100 gr., syrup. aurant. 20 gr.—S. A tablespoonful every two hours. A few doses are generally effectual.—*Berl. Klin. Woch.*, December 8, 1879.

Fissured Nipples.—Dr. Willis King, of Sedalia, sends the following to the *St. Louis Courier of Medicine*. A transcript may be useful to our readers:—Of all the small things which worry a practitioner of medicine, this apparently little ailment has been the bugbear of my professional life,—apparently so insignificant, and yet so painful, so persistent and intractable, that I have often felt that I would give a good round sum for what I could really call a remedy, and have always wished that I might never see another case of it. Do what we will, the child must suck (children do not 'nurse' in Sedalia, they *suck*), or the milk must be drawn with a breast-pump, and in either case the fissure is torn open and bleeds, and our case is as bad as ever. I have tried everything—tr. benzoin, argent. nitras, collodion,—and have seen my work go down to nought at the hands (or mouth rather) of an infant only one week old. I found myself with a case of this kind on my hands in the month of August of this year. Two or three times the case was reported to me as cured, and as often an 'adverse report' had been sent in the next day. On one of these occasions I walked into my private office, trying to think of somethiug, when my eyes fell on a bottle of 'Professor Callen's Brazilian Gum.' It came to me like a revelation. I had bought the stuff to mend a Politzer's bag. It is pure gum [india-rubber] in solution (in naphtha, I think), and is about the consistency of thick mucilage. When exposed to the air the solvent evaporates, and leaves the elastic rubber adhering to whatever it has been applied. I knew it would do. I went at once to the patient, and applied it with a camel's-hair pencil all over the nipple (except the milk-ducts) and over the areola around the nipple. It remained on three days, and came off leaving the parts entirely healed. There were one or two slight fissures afterwards, but the patient applied the remedy without sending for me, and had no further trouble. I have tried it in one other case, with equal success. I also applied it to a largely abraded surface on a man's face, who had been thrown from a buggy, and scraped the side of his face on the ground. The remedy adhered beautifully, excluding the air, and when it came off, rubber, scab, and all came together, leaving a perfectly healed surface behind. This preparation is usually kept by dealers in leather supplies." [Cobblers, for mending shoes with what they call the "seamless patch," use a kind of cement, made by dissolving gutta-percha in benzine or bisulphide of carbon. It is found in the "leather and findings" stores, put up in two-ounce bottles, retailing at 15 cents. The odour is disagreeable; but if bisulphide of carbon is the solvent used it may be deodorised by tinct. iod. one-fourth, or it may be scented with mint or bergamot. Chloroform is also a solvent for gutta-percha. This solution has been used to retain the edges of incised wounds in apposition; also to protect abraded skin against mechanical injury or the absorption of poisons. The dermatologists have of late been very largely using rubber bandages in the treament of eczema and other skin diseases, and it occurred to us that this solution of gum would be an excellent substitute, and much more convenient. On investigation, we find it has been recommended in the treatment of lepra, psoriasis, small-pox, and erysipelas. We believe Dr. King is the first to recommend it for sore nipples.—Ed. *St. Louis Courier of Medicine.*]

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

What is that to us?—The Manchester Board of Guardians, at their last meeting, had read to them by their clerk a letter from the city coroner. It appeared that the jury who had inquired into the death of a child found that she died from natural disease, accelerated by want of proper nourishment; and the jury recommended that a copy of the verdict should be sent to the Board of Guardians, with an expression of their opinion that more nourishment should have been allowed under the circumstances. After a prolonged discussion, it was decided by a large majority that no reply should be sent to the coroner.

Street Nuisances.—A society, called the Metropolitan Organ Grinders' Brass Bands, and other Street Nuisances Society, is now being formed. The offices are at 32, Piccadilly-circus, and the Hon. Secretary is Mr. J. K. Soady.

Philo, Kensington.—You are right. Dr. Harington, although well known in the world as an accomplished musical composer, was by profession a physician. He practised at Bath, and died there in 1816 at the age of eighty-nine.

Football Accidents.—In view of the fatal accident last week at Warrington, when "a very exciting game of football" was being played, and of the frequent serious injuries received by football players, it is to be regretted that no uniform set of rules has yet been laid down, so far as we know, by which the dangers of the game might, no doubt, be considerably reduced.

V. W., Wiltshire.—1. The local authorities have power to apply to a magistrate, on a certificate of a medical officer, for an order for the compulsory removal to hospital of persons suffering from infectious diseases—a power, of course, only applied to the confined dwellings of the poorer classes. 2. Several of the larger towns in the North of England have obtained, in their local Acts, powers for compulsory registration of infectious disease, as you will see by reference to page 718 of our second volume for 1879.

A Total Abstainer.—1. There are now upwards of three thousand coffee taverns in different parts of the country. 2. By the Amendment Act, 1879, for the Sale of Food and Drugs Act, now in force, besides providing for the sale, in "public places," of such articles as are provided for by the original Act, the new statute fixes a standard of strength for spirits sold by retail—viz., 35° under proof for gin, and 25° under proof for brandy, whisky, and other spirits. Any spirits below this standard now come within the Act, and are deemed to be adulterated, unless due notice is given at the time of sale. Under this Act, a general notice exhibited by publicans that the spirits they sell are diluted, ceases to afford them legal protection.

Anti-Vaccinationists and their Friends.—At the meeting of the Dewsbury Board of Guardians, lately, a letter was read from the Home Secretary, referring to the recent case against George Senior, who was fined for not having his child vaccinated, but which was proved to have been done. It was stated that the magistrates' clerk had said that the child had not been vaccinated within the limits prescribed by law—viz., three months. The Home Secretary saw no reason to question the propriety of the course taken by the magistrates. The Guardians resolved that the attention of Mr. Serjeant Simon, M.P., be called to the matter, and that he be requested to ask a question on the subject in the forthcoming session of Parliament.

A Harbour in Distress: Illegitimate Children.—It appears that the Lambeth Workhouse is a highly favoured resort of unmarried mothers in the metropolis. At the last meeting of the Board of Guardians, the chairman called attention to the large increase of unmarried women admitted to the workhouse, and the number of illegitimate births that took place there. The previous week eight or nine cases were brought before him, and a similar number that morning. During the past year there had been 214 births in the workhouse, 147 of which were illegitimate, and 53 legitimate; the remaining 14 were stillborn, and of those 12 were illegitimate and 2 legitimate. A resolution that "a call over" should be made was adopted, with the view of freeing the workhouse of some of the young mothers.

A New Way of Shifting Responsibilities, Manchester.—The late Mr. William Mather, of Manchester, left to the trustees under his will £2000 "in trust that they should pay the same (duty free) to the treasurer of the fund called the Hospital Sunday Collection in Manchester, to be by him distributed and applied to and amongst such charitable institutions, and in the same proportions and shares as the moneys raised by the Hospital Sunday collections in Manchester are usually paid, divided, and applied, and as if the same were part of such collection." And the late Mrs. Alice Aldred, of Levenshulme, directed by her will that after payment of legacies to certain charitable institutions in Manchester and Stockport, and other legacies to private persons, the remainder (considerably over £2000) be paid to the Hospital Sunday Fund, to be divided by the Committee as if the same were part of such collection.

Cremation on the Continent.—A report for the year 1879 by the authorities of Gotha, on this subject, shows that the first body cremated was on December 10, 1878; that subsequently fifteen others have been submitted to this mode of disposal; that about two hours is, on an average, the time required for complete incineration; that no complaint as to the result has been made at Gotha, and several other German towns are preparing to adopt the system of fire burial; and that the human remains which were cremated came from all parts of Germany, Dresden, Hanover, Breslau, and Leipsic, and even Vienna. Considerable extension in the fatherland of this system of burial is looked forward to, the objections urged against it having, it is stated, been satisfactorily disproved. The promoters of the scheme hope that time will remove the prejudices which at present exist in England against it, and that this method of disposing of human bodies will supersede the interment of them underground.

A "Disbeliever" in Scientific Medicine.—An inquest was lately held at Smethwick on the body of a child, aged nine months, who died of pleuro-pneumonia. Medical evidence, on the post-mortem examination of the body, was to the effect that, had the child been carefully and properly managed and received medical treatment, it might have recovered. The father, however, who had been an assistant to an herbalist, but was now a "literary," and gave "physiological advice," was a disbeliever in doctors, and "averse to drug treatment" as well as to vaccination. The child, therefore, had had no medical remedies administered, but some unknown "composition," and it died before a medical man was called in. The jury returned a verdict of manslaughter against the father, who was committed to take his trial at the assizes.

An Old Burial-Ground: Whitfield's Chapel, Tottenham-court-road.—An action to restrain the Vestry of St. Pancras from converting this old burial-ground into a garden was heard before the Master of the Rolls lately. The plaintiff had in 1862 bought a portion of the freehold, and this remained practically waste ground, the condition of which had been complained of. The Vestry relied upon Orders in Council made by virtue of the Burials Acts, 15th, 16th, 18th, and 19th Victoria. His Lordship, however, held that these Acts only applied to public burial-grounds, and that this being unconsecrated, and there being no evidence that there were any private vaults under the plaintiff's land, in which interments could take place by permission of the Secretary of State, the Acts did not apply to the present case. He therefore granted an injunction in the terms asked for by the plaintiff, giving leave to take an inquiry into the damages which he had sustained by the improvements begun in the burial-ground by the Vestry.

The Good Old Times.

The following, from an American contemporary, will amuse and edify our readers:—

"THE OLD OAKEN BUCKET.

"(*As Revised and Edited by a 'Sanitarian.'*)

"With what anguish of mind I remember my childhood,
Recalled in the light of a knowledge since gained;
The malarious farm, the wet, fungous-grown wildwood,
The chills then contracted, that since have remained;
The scum-covered duck-pond, the pigstye close by it,
The ditch where the sour-smelling house-drainage fell;
The damp, shaded dwelling, the foul barn-yard nigh it—
But worse than all else was that terrible well,
And the old oaken bucket, the mould-crusted bucket,
The moss-covered bucket that hung in the well.

"Just think of it! *Moss* on the vessel that lifted
The water I drank in the days called to mind,
Ere I knew what professors and scientists gifted
In the water of wells by analysis find.
The rotting wood-fibre, the oxide of iron,
The algæ, the frog of unusual size,
The water—impure as the verses of Byron—
Are things I remember with tears in my eyes.

"And to tell the sad truth—though I shudder to think it,—
I considered that water uncommonly clear,
And often at noon, when I went there to drink it,
I enjoyed it as much as I now enjoy beer.
How ardent I seized it with hands that were grimy!
And quick to the mud-covered bottom it fell:
Then soon, with its nitrates and nitrites, and slimy
With matter organic, it rose from the well.

"Oh! had I but realised, in time to avoid them,
The dangers that lurked in that pestilent draught,
I'd have tested for organic germs and destroyed them
With potassic permanganate ere I had quaffed;
Or perchance I'd have boiled it and afterwards strained it
Through filters of charcoal and gravel combined,
Or, after distilling, condensed and regained it
In potable form, with its filth left behind.

"How little I knew of the dread typhoid fever
Which lurked in the water I ventured to drink!
But since I've become a devoted believer
In the teachings of science, I shudder to think.
And now, far removed from the scenes I'm describing,
The story for warning to others I tell,
As memory reverts to my youthful imbibing,
And I gag at the thought of that horrible well,
And the old oaken bucket, the fungus-grown bucket—
In fact, the slop-bucket—that hung in the well.

—*The Sanitarian.* "J. C. BAYLES."

COMMUNICATIONS have been received from—

Mr. JOHN FORSTER, Adelaide, Australia; THE SECRETARY OF THE NAVAL SUPPLEMENTAL FUND; THE HON. SECRETARY OF THE WEST KENT MEDICO-CHIRURGICAL SOCIETY; Messrs. BOYLE and SON, Glasgow; THE REGISTRAR OF APOTHECARIES' HALL, London; THE SECRETARY OF THE ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road; Dr. IZALAIDI, Budapest; Dr. RUSSELL, Birmingham; Dr. HENRY THOMPSON, London; Dr. G. BATTY TUKE, Edinburgh; Mr. C. J. CULLINGWORTH, Manchester; Mr. D. COLQUHOUN, London; Mr. W. E. HOYLE, London; Mr. E. L. HUSSEY, Oxford; Dr. CARTER, Liverpool; Dr. LUCAS, Indore, India; Professor FLOWER, London; THE REGISTRAR OF THE MEDICAL SOCIETY OF LONDON; THE SECRETARY OF THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY; Mr. R. C. CLEMENT LUCAS, London; Dr. ED. I. SPARKS, Mentone; Mr. H. TRUEMAN WOOD, London; THE REGISTRAR-GENERAL, Edinburgh; Dr. J. W. MOORE, Dublin; Mr. H. T. BUTLIN, London; Dr. J. M. BRUCE, London; Mr. G. H. PAGE, Dublin; THE SECRETARY OF THE ROYAL INSTITUTION, London; Mr. T. M. STONE, London; Mr. J. CHATTO, London; Dr. GAVIN MILROY, Richmond, Surrey.

BOOKS AND PAMPHLETS RECEIVED—

The Essentials of Bandaging, by Berkeley Hill—The London Associated Reporters' Almanac, 1880—Dentists and Dentistry, by Mr. Albert Carter—Hot-Air *versus* Hot-Water Baths, by Mr. Richard Metcalfe—Brain: a Journal of Neurology—Eyesight, Good and Bad, by R. Brudenell Carter, F.R.C.S.—Report of the Health, etc., of Kensington, by T. Orme Dudfield, M.D.—Biological Atlas, by D. McAlpine, F.C.S.—Transactions of the American Otological Society—Torquay Local Board, Annual Report of the Medical Officer of Health for 1879—Transactions of the American Ophthalmological Society—Surgical Anatomy, by Edward Bellamy, F.R.C.S.—Post-mortem Examinations, by Professor Rudolph Virchow—Student's Primer on the Urine, by J. Travis Whittaker, M.D.—Pseudo-Hypertrophic Paralysis, by W. R. Gowers, M.D., F.R.C.P.—The Spectroscope in Medicine, by Chas. A. MacMunn, B.A., M.D.—The Local Authority of Glasgow *v.* Young, by Jas. B. Russell, M.D.—Meddelelser fra Lazaretterne for Skarlagensfeber, i., ii., iii.—An Atlas of Human Anatomy, by R. J. Godlee, M.S., F.R.C.S.—Health Report of the Parish of St. Marylebone, by John Whitmore, M.D.—Die Messung des Pulses und des Blutdrucks am Menschen, von Dr. L. Waldenburg—Movable Atlas, by G. J. W. Witkowski, M.D., and Robert H. Semple, M.D., F.R.C.P. Lond.—Comparative Experiments of Carbolic Acid and Sanitas, by Dr. W. H. Stephenson.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Centralblatt für die Medicinischen Wissenschaften—Gazette Hebdomadaire—Louisville Medical News—Nature—National Board of Health Bulletin—Revue Médicale—El Siglo Medico—Revue des Sciences Médicales—Anti-Vivisectionist—The Boston Medical and Surgical Journal—Medical Enquirer—Revue d' Hygiène—Michigan Medical News—Students' Journal and Hospital Gazette—Centralblatt für Gynäkologie—St. Louis Courier of Medicine—Dental Jairus—North Carolina Medical Journal—Philadelphia Medical Times—Cornish Telegraph—New York Medical Journal—American Bookseller—Queensland Government Gazette—Canada Lancet—Sanitary Journal—Hospital Gazette—Canadian Journal of Medical Science—Rivista de Medicina.

APPOINTMENTS FOR THE WEEK.

January 24. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

Royal Institution, 3 p.m. Prof. T. Rupert Jones, "Coal."

26. Monday.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. Dr. Cockle (the President), 1. "On a Case of Obstructive Aortic Disease"; 2. "On a Case of Double Ptosis." Dr. Carpenter (of Croydon), "On the Treatment of Leucocythæmia."

27. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Royal Medical and Chirurgical Society, 8½ p.m. Mr. Christopher Heath, "On a Case of Aneurism of the Subclavian Artery treated by Amputation at the Shoulder-Joint and the Introduction of Needles into the Sac." Dr. Vandyke Carter, "Contributions to the Experimental Pathology of Spirillum Fever."

Royal Institution, 3 p.m. Prof. Schäfer, "Physiology of Muscle."

28. Wednesday.

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Lister), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.

Association of Surgeons Practising Dental Surgery, 8½ p.m. General Meeting for Election of Officers and Council.

Hunterian Society (London Institution), 8 p.m. Dr. Braxton Hicks, "On Obliquity of the Pregnant Uterus." Mr. Clement Lucas will show a Case of Aneurism by Anastomosis of Half the Face."

29. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m., Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

Royal Institution, 3 p.m. Prof. Dewar, "Chemical Progress."

30. Friday.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

Royal Institution, 9 p.m. Mr. J. Marshall, "Proportions of the Human Figure."

VITAL STATISTICS OF LONDON.

Week ending Saturday, January 17, 1880.

BIRTHS.

Births of Boys, 1328; Girls, 1267; Total, 2595.
Average of 10 corresponding years 1870-79, 2855·8.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	852	878	1730
Average of the ten years 1870-79	877·0	882·7	1759·7
Average corrected to increased population ...	...	...	1760
Deaths of people aged 80 and upwards ...	...	...	66

Note.—The births and deaths registered last week may be compared with the average numbers in the corresponding weeks of the ten years 1870-79 after raising the average by 7 per cent. for increase of population.

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa
West	561359	2	4	7	1	11	...	...	...	1
North ...	751729	...	6	12	...	30	1	4	1	1
Central ...	334369	...	5	3	3	9	...	2	...	...
East	639111	1	11	20	2	26	...	5	...	2
South	967692	1	14	47	4	38	...	4	...	5
Total	3254260	4	40	89	10	114	1	15	1	9

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	30·147 in.
Mean temperature	33·1°
Highest point of thermometer	38·8°
Lowest point of thermometer	27·0°
Mean dew-point temperature	29·6°
General direction of wind	Variable.
Whole amount of rain in the week	0·20 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, Jan. 17, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1880.*	Persons to an Acre. (1880.)	Births Registered during the week ending Jan. 17.	Deaths Registered during the week ending Jan. 17.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In centimetres.
London	3664149	48·6	2595	1730	38·8	27·0	33·1	0·62	0·20	0·51
Brighton	107321	45·6	53	33	39·3	29·0	33·6	0·90	0·51	1·30
Portsmouth ...	134224	29·9	82	49	...	...	...	...	...	...
Norwich	85827	11·5	58	38	40·0	28·0	34·0	1·11	0·02	0·05
Plymouth	74993	53·8	36	39	43·5	29·3	36·8	2·67	0·49	1·24
Bristol	213536	48·0	141	69	42·0	25·2	33·8	1·01	0·47	1·19
Wolverhampton ...	75970	22·4	49	35	41·2	25·3	32·2	0·11	0·50	1·27
Birmingham ...	394738	47·0	312	190	...	...	...	...	...	...
Leicester	129912	40·6	109	45	...	...	...	...	...	...
Nottingham ...	173627	17·4	126	82	40·1	27·8	33·3	0·73	0·26	0·66
Liverpool	544056	104·4	377	293	42·9	30·4	34·6	1·45	0·64	1·63
Manchester ...	363130	84·6	243	192	...	...	...	...	...	...
Salford	185786	35·9	142	85	...	...	...	...	...	...
Oldham	115413	24·7	78	51	...	...	...	...	...	...
Bradford	197196	27·3	130	76	49·0	26·0	33·2	0·67	0·04	0·10
Leeds	318929	14·8	196	106	40·0	27·0	33·9	1·06	0·06	0·15
Sheffield	304938	15·5	220	158	42·0	27·0	34·0	1·11	0·06	0·15
Hull	149627	41·2	123	78	39·0	26·0	33·0	0·56	0·06	0·15
Sunderland ...	116730	42·2	85	59	40·0	28·0	33·8	1·01	0·35	0·89
Newcastle-on-Tyne	149366	27·8	107	76	...	...	...	...	...	...
Edinburgh	229839	54·8	139	81	39·0	24·2	31·8	−0·11	0·44	1·12
Glasgow	589598	97·7	370	270	45·0	28·0	34·4	1·33	0·14	0·36
Dublin	314666	31·3	204	229	42·2	27·3	35·8	2·12	0·34	0·86
Total of 23 Towns in United Kingdom	8633571	39·2	5975	4064	45·0	24·2	33·8	1·01	0·29	0·74

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 30·15 in. The highest reading was 30·43 in. on Monday morning, and the lowest 29·80 in. on Friday evening.

* The figures for the English and Scottish towns (except for Nottingham, Salford, and Oldham) are the numbers enumerated in April, 1871, raised to the middle of 1880 by the addition of nine years and a quarter's increase, calculated at the rate which prevailed between 1861 and 1871. Revised estimates have been adopted for Nottingham, Salford, and Oldham, based upon special returns of inhabited houses existing within those boroughs. The population of Dublin is taken as stationary at the number enumerated n April, 1871.

ORIGINAL LECTURES.

A CLINICAL LECTURE
ON SOME OF
THE CAUSES OF LOCOMOTOR ATAXY.

By JONATHAN HUTCHINSON, F.R.C.S.,
Senior Surgeon to the London Hospital;
Consulting Surgeon to Moorfields Hospital; Professor of Surgery and Pathology to the Royal College of Surgeons.

GENTLEMEN,—We often, in connexion with special cases, have to speculate as to the nature of the influences by which the liability to locomotor ataxy is induced. On the present occasion I will not do more than briefly recapitulate them, as I wish to proceed to the detailed narrative of several illustrative cases. Let me say, then, in reference to this very slow and, in its early stages, insidious malady, that we hold in suspicion all influences which cause loss of tone or exhaustion of nervous energy, and certain others which favour the occurrence of tissue-change. We believe that masturbation in early life, premature sexual indulgence, normal and moderate sexual indulgence in those who are not vigorous, are very powerful and frequent causes. We believe further that fatigue in standing or walking, especially if the spinal cord be already weak in energy, and more particularly if such fatigue occur in combination with exposure to cold or wet, is not unfrequently influential. Not only cold, but heat, if excessive, may be injurious; and it is possible that sometimes standing with the back exposed to a fire, whether from habit or in connexion with special occupations, is an important cause. The excessive employment of tobacco, and possibly also of tea and coffee, is also probably injurious in some cases; and finally, we must add that nerve-substance which has at some former time been nourished by syphilitic blood remains ever after more than ordinarily liable to take on the changes which result in this malady. It is a disease much more common in men than in women, and clearly has much to do with some male proclivities or habits. Probably its causes are often complex. In some cases we can wholly exclude one, and in some another, whilst in many more than one has been present. I will first relate to you a case in which syphilis as an antecedent was absent, and in which there seemed more than usual force in the suspicion that sexual influences had been the real cause.

A gentleman aged thirty-three, from a distant colony, called on me late one evening, and begged an immediate interview. With much reluctance he stated that his object in seeking advice was entire loss of sexual power. He had no loss of desire, but for a year past had never ventured to attempt intercourse, and his erections were very feeble. He was not absolutely without emissions, but they were exceedingly infrequent. I noticed, as he sat opposite me, that his pupils were unusually small; and, on examining them carefully, found that they were absolutely motionless. He said that one was sometimes larger than the other, and that he sometimes squinted. After a while, during our conversation, a decided convergence developed itself. He had never had ptosis, and on testing his sight I found that he had not lost accommodation, and could still read "Bradshaw" with his left eye. His right eye had been defective, he said, for two years. In answer to the usual questions, I learnt that my patient had practised masturbation at school, had commenced the habit of sexual intercourse at sixteen, and had at times indulged to great excess. He had been a great smoker, and very intemperate in the use of spirits. He had formerly enjoyed excellent nerve-vigour. He had been in a cavalry regiment, and had been a good rider. In addition to the ailments already mentioned he had of late suffered much from sudden pain in the legs. It would sometimes seize him in the street, and make him stop, or at times almost cause him to fall. Often the legs ached at night till he could not sleep. He would often be a few days or a week or two without these pains, and then, without known cause, they would return. For two years past he had been liable to a dull pain in the legs, lasting for several days at a time. He had not experienced any pains which he considered to be "stabbing." He could walk well with his eyes shut, nor did he feel any degree of numbness in the soles of his feet. Some of the symptoms of declared locomotor ataxy were therefore absent. I inquired as to the state of his bladder, and was told that he had often much difficulty in emptying it, the stream being slow and feeble, and often ceasing before the viscus was empty. He had found that he could rouse the bladder to further contraction by applying a cold sponge to his back.

I made no doubt that the case was one of locomotor ataxy, induced by premature and irregularly excessive employment of the sexual system, and, taking this view, it became of interest to inquire as to the general state of nerve-function. I was told that no loss of memory or failure of energy or spirits had been experienced. Mr. W., although exceedingly chagrined at his sexual incompetency, maintained a cheerful demeanour, and was not depressed in any way unfitting him for business or society. He had not suffered much from headaches, but experienced occasionally "brain-clouds," which made him feel as if he should faint. These would come on if he was in a warm room or in a large company, and for fear of them he was obliged to absent himself from church. In cold weather he had very cold feet, and his fingers were more prone to "die" and become white than formerly; but he still enjoyed cold bathing, and was not more easily chilled by it than others. His walking power was fair, and he believed that he could still keep his seat in the saddle. On the last occasion on which he had sexual intercourse the act had been followed by most severe pain around the anus (spasm of sphincter), and this had recurred several times during the next few weeks. His bowels had never shown any tendency to constipation. As regards the precise date of onset of symptoms, it was very difficult to assign it, as they had come on rather gradually. It seemed probable, however, that sexual debility had been the earliest; then pains in the legs, and next the failure of sight in the right eye. These had all set in about three years ago. It remained to use the ophthalmoscope; but I ought to have already told you that he could see only $\frac{20}{70}$ with the right eye, and $\frac{20}{30}$ with the left. His pupils were not larger than No. 2. Atropine having been put into the left, it dilated moderately. The disc was of a pale grey tint everywhere, but palest on the side next yellow spot. The central artery was small, and the veins full. I found no evidences of inflammation, either past or present. In the other eye the pallor of disc was decided, but much less in degree. It is of interest to remark here that he believed that his degree of amblyopia had not increased during the last two years. During the last year all his symptoms had appeared stationary.

Let me recapitulate. We have white atrophy of the optic nerves, greatly in excess in one eye; occasional strabismus; brain-clouds and liability to feel faint; impotence, without cessation of desire; cysto-paresis; severe pains in the lower extremities, without any diminution of co-ordinating power. That these were due to the cause suggested, and to nothing else, is, I think, highly probable. Our patient had had gonorrhœa, but never syphilis; and he did not, so far as he knew, inherit any tendency to nerve-disturbance. He asked me whether I should think it right for him to marry; and I was, of course, obliged to tell him that it was out of the question. Some weeks later I learned that he had died after a few days' illness. I did my best to ascertain from his brother and his surgeon what the cause of death had been, but it remained very obscure. There were cerebral symptoms; but it was possible that they were consequent on contusion of brain or fractured base received in a fall. The following are the facts as I obtained them.(a) Unfortunately

(a) I append the following narrative of the last illness, not because I believe that it had anything to do with the ataxy, but because it is just possible that it may in future prove of more value than I at present perceive:—November 14: He fell in the street; was taken to a public-house and had spirits, and went to business. His nose bled freely. 15th, Friday: His brother called on him in the evening, and found him lethargic and in bed. He roused him and got him up. He talked as usual, and smoked two pipes. He complained of a severe cold. 16th, Saturday: His brother called on him in the morning. He was able to talk; was in bed. In the evening he again got up. Still lethargic. Eyes looked glassy. 17th, Sunday: Much the same. In the afternoon called in his medical man, who thought it bronchitis. In the evening his brother saw him again. He seemed more dull, and unable to raise himself. His brother stayed with him all night. The catheter was used this evening. 18th, Monday: His brother met the doctor at ten, and the case was declared to be typhoid fever, and almost hopeless. Still sleepy; could be roused to answer a question rationally, and then sank to sleep again. He was now taking champagne, etc., freely. 19th, Tuesday: At two in the morning he refused to take food. He tried to put out his tongue, but could only move it a little and could not get it out. He gradually sank without struggle about nine on Tuesday morning. His bowels had acted but once during this illness. Abdomen tympanitic.

there was no autopsy. His brother told me that he was engaged to be married, but that he had not manifested any tendency to low spirits.

In the following case we have an example of an apparently causeless form of the disease, in which the ataxic symptoms were the first to show themselves. The vaso-motor system, as appreciated by the pupils, bladder, and intestines, seemed to have still escaped at a stage when the patient was only just able to walk. As to cause, it was exceedingly difficult to assign anything if we assume that the sexual history was given with candour. The man had been married for twenty years and had always been moderate.

Thomas M., aged forty-nine, is now a clerk and was formerly in the Army. He has lived in all parts of the world, and has always had excellent health. He denies that he ever had syphilis. He married twenty years ago, and has four healthy children, the youngest six years old. He has been a very steady man, scarcely smoking at all (not once a month), and for six years has been a total abstainer. He has been for ten years past engaged as a clerk in a position requiring much walking, and has been of very active habits. He could formerly run well, and was an active cricketer. Three or four years ago he began to find that he could not run so well as formerly—his ankles seemed stiff; then followed a sort of numbness in his limbs, especially in the lower extremities. Subsequently his hands would at times feel stiff, and he has even had difficulty in writing his name. He used to vary much and used to have his "achey days," and was always more ill during cold weather, and needed excessive clothing in bed.

When the eye symptoms were beginning he had much pain in the back of the head and down the neck. He used occasionally to consult Dr. W. for his leg-weakness, but he never sought much treatment until his eye symptoms set in a month ago. He frequently had sharp rheumatic pains in the thighs and calves, and amongst the symptoms which he especially mentions was pain in his heels. It was just at the bottom of the heels, sometimes aching, sometimes numb, and sometimes sharp stabbing pain. He has never had constipation nor any bladder symptoms. He thinks that he still passes a good stream of urine, and with ordinary propulsive force.

He totters much in his walk, whether with the eyes open or shut. He varies much in his ability to walk, and at times can scarcely walk without assistance. If he sits long with his hands clasped he has difficulty in unlocking them, and if his feet rest on each other in bed he can scarcely liberate them. After once getting well in motion he can get on well enough, but he has always much difficulty in starting, as his limbs feel stiff and wooden. His pupils are of equal size, No. 3, and act fairly well. He has no defect of his third nerve, but the right sixth is paralysed. It is this paralysis which now brings him under care. It has been present for a month. He has no headache and no severe pains anywhere.

He does not know of nervous complaints in his family. He thinks that he has himself always been a little nervous, but never so much so as to interfere with his occupations.

As to sexual matters there does not appear to be anything to be said. He has always been moderate, and never had reason to think that it hurt his health. His vigour has during the last year much diminished, but he asserts that the function is still not in absolute abeyance.

Daniel B., aged forty-four, is now in a somewhat advanced stage of locomotor ataxy. His gait is characteristic; the soles of his feet are numb; he cannot come downstairs without holding the banister; he sometimes goes twenty-four hours without making water; and lastly, he has a small and motionless pupil. It is probable that he has never had constitutional syphilis, but fifteen years ago he had a chancre. He has been a fairly steady man as regards drinking, but has smoked freely. He has been married twice, and his present wife is considerably younger than himself. He does not consider that he has ever been excessive in sexual matters, but admits that for many years he has been conscious that he was unnaturally fatigued and exhausted after intercourse. For three months the function, which had been gradually failing for long, has been in absolute abeyance. He is still a cheerful and intelligent man. Such being a brief sketch of his case, I will now ask you to investigate its several features in detail.

I have first to ask your attention to the very long period during which premonitory, or rather I ought to say initiatory, symptoms have been experienced. He says that it has been coming on him for more than fifteen years. He dates especially from an attack of so-called rheumatism which occurred when he was engaged in some very wet work in Wales at the date mentioned. He had then rheumatic pains in both lower extremities, and gnawing pains in the shin-bones "as if rats were gnawing them." There was no material swelling of joints, and he was never confined to bed. When after some weeks the rheumatism passed off, the right leg was left weak, and it has continued so ever since. The left leg began by very slow degrees to follow in the same way, but the right always was, and still is, the most affected. His occupation was that of an engineer in hot-water apparatus, and he has had to stand much and often in wet and cold. It is to this exposure that he attributes his malady. Often after standing his legs would ache till he could not sleep, and he often also had heel-ache. By degrees he found that he was often giddy in the street, and in danger of reeling against people; that he could not easily go upstairs without helping himself by the handrail, and that especially he could not come down unless he might hold the balustrade, being in danger of falling headlong. He mentions also that in washing his face he often fell forwards. He recounts with some pathos having been caught in a trap at Swan and Edgar's establishment, where he had gone upstairs to attend to the hot-water pipes, and found, on wishing to leave, that the handrail had been covered with silk dresses, etc., and that he could not have its help in his descent. Often, when making use of steps in his work, he has been compelled to come down because he could not "feel his feet." His right foot was always the more numb. His upper extremities have not until quite lately been affected, and he can still use his fingers well for everything excepting such efforts as buttoning small buttons, etc. Although symptoms of the kind mentioned have been slowly increasing in him for fifteen years, yet it is only lately that he has been disabled from his work. During the last two months he has experienced a decided increase in all his disabilities. We will now examine his eyes—or rather I should say his left eye, for his right is an artificial one. He was obliged three or four years ago to resort to spectacles for reading, and he now needs + 14 to enable him to read No. 5, and higher than this I cannot get him. In the distance with + 22 he sees $\frac{20}{30}$ imperfectly. He has, therefore, lost accommodation to a certain extent, and is also amblyopic. His pupil is small (No. 2 of the scale) and quite motionless; it dilated fairly with atropine, and the disc is seen to be perhaps slightly congested, certainly without the slightest degree of pallor. Any extra effort to see makes him feel giddy. From these facts I should infer that his ciliary ganglion is probably in part disorganised, and its vaso-motor elements have suffered more than those derived from the third nerve (hence his paralytic myosis).

You are aware that we associate cystoplegia with iridoplegia, both the bladder and the iris obtaining important supplies from the vaso-motor nerves. He tell us that for years he has at times had much difficulty in commencing the act of micturition, and often would fail altogether. Sometimes he could pass but little, and would experience a fresh call almost immediately. Often, he thinks, he has retained his urine for twenty-four hours, and has then voided only a moderate quantity (probably not emptying the bladder). He has never actually needed the catheter. As to constipation of the bowels, it has never been very troublesome. Through life the bowels have been irregular, but not more constipated of late than formerly. As I have admitted elsewhere, it is somewhat difficult to explain this frequent absence of the symptom of bowel-torpor from the roll of results due to this malady.

As regards cerebral symptoms, they have not in the present instance been prominent. We are told that there has been tightness across the forehead at times, and a dull coldness in the back of the head very frequently, but no attacks of severe pain and no sick headaches have occurred.

I have nearly completed what I have to say as to symptoms. Let me add that patellar reflex (in the right limb) is absent, and that the skin of his genitals and of his feet is numb, though not absolutely anæsthetic. He has had "rheumatic pains" in abundance, and some sharp stabbing pains, but these have not been of extreme severity and have not prevented his sleep. His appetite and digestion are good; his pulse 100, sharp and irritable.

If you ask me what I believe as to the cause of the disease in this case, I would say that I think there is much plausibility in his suggestion that frequent exposure to cold and wet and over-fatigue in standing at his work may have been influential. With them, however, I have little doubt that sexual intercourse has taken its share. Although it has never been what most men count excessive, yet he admits most freely that he was conscious that it always did him harm. His symptoms date almost from the time of his second marriage. Further, as an influence which may have helped to undermine the tone of his nerve-centres, and thus favour the occurrence of passive congestion and degeneration, we must not forget the habit of smoking.

The next case which we have to study is that of a German hotel-keeper, aged forty-four, who has had symptoms of ataxy for fifteen years or more. He was under the care of the late Dr. A. during the latter years of the life of that excellent physician, and has since been jointly under that of Dr. Hughlings-Jackson and myself. In what I have to say about him I shall avail myself without further acknowledgment of the suggestions of my distinguished colleague. Mr. T. (for that is the name which we will give him), when about twenty-five, contracted syphilis, and had the constitutional symptoms completely and severely. He was nearly two years under treatment, but at the end of that time he seemed cured, and from then to now he has never had anything suspicious, excepting what I have to relate as to ataxy. He thinks that almost from the date of final disappearance of the constitutional symptoms he became liable to rheumatic achings, from which formerly he had never suffered. Three years after the syphilis he married. His wife had first a series of dead births, and then several living children, all of which showed symptoms of taint. I did not see any of them, but I am assured by his medical attendant that even the last (now only three), and born therefore fifteen years after her father's syphilis, had unmistakable symptoms. Meanwhile his wife has never shown any indications of taint. Thus we may take the inheritance by the children as almost conclusive proof that an active form of the disease has long persisted in the father's tissues. You will note that Mr. T. has been married fifteen years. He expresses himself as confident that nothing in connexion with married life has increased his malady. He has been always exceedingly moderate in indulgence, and still retains the function. Seven years after his marriage his pains, which had been rheumatic, changed their character, and became very severe—lightning shoots, boring, etc.,—and about the same time he became liable to "abdominal crises" of terrible severity, often lasting a whole week, and even sometimes ending in stercoraceous vomiting. Neither these nor the attacks of pain were, however, very frequent, and in the intervals he had good health. About six years ago, Dr. A. very naturally diagnosing syphilis, sent Mr. T. to Aix-la-Chapelle, where, under the advice of a leading surgeon, he went through a complete course of inunction. Four years afterwards I asked him his impression as to the result, and these were his words: "It did me a great deal of harm. I was much weakened, and did not regain my former health for two or three years." He would not admit that any of his symptoms were mitigated excepting that the abdominal crises were less prolonged. Instead of a week they usually lasted only a day, but then they recurred much oftener.

When Dr. Jackson and I saw Mr. T., we advised him, having regard to the fact that iodide of potassium always depressed him much, to abstain from all specifics, and be content with tonics and rest. Two years later I saw him again. He had in no respect got worse. His pains were still severe, and he was still liable to attacks of vomiting, but he could yet attend to his occupation and take a fair amount of exercise. At this time the following facts were ascertained: His pupils, usually rather small (No. 3), did not dilate in the least when covered, nor contract on sudden exposure, but contracted definitely and considerably when he was told to converge the eyes. From this I inferred that his third nerve was intact, but the vaso-motor very defective. He could accommodate fairly well, and read small print without glasses. Some years ago, for a time his accommodation failed to a considerable degree, and he used glasses for nine months, and could not read without them. His patellar reflex was absolutely absent. His sexual function remained, as it had been for years, not very vigorous, but not absent. His bladder had not afforded any definite symptoms; it was somewhat feeble and irritable, but he had never had either incontinence or retention. He could walk some distance, but was easily tired both by standing and walking. He had a feeling of great additional comfort in his lower extremities when lying down, saying that he felt as if he should be all right if he could constantly remain on his back. His description of his abdominal crises was interesting. Some years ago they used, he said, to last a week, and were attended by almost constant vomiting of bile and by constipation. On more than one occasion he vomited what seemed like stercoraceous matter. No treatment ever availed anything excepting absolute stillness. Of late the attacks had not lasted more than twelve or eighteen hours, but they came on more frequently, and he seldom had an interval of more than a fortnight. He had no premonitory symptoms, and could seldom in any way explain their production. He would wake, he said, with a disagreeable heavy feeling in his head, and soon afterwards there would follow a severe pain to the left of the epigastrium, and then vomiting would set in and recur every three minutes. I asked him in what he distinguished his attacks from ordinary sick-headaches. He said that in early life he had not been specially liable to sick-headaches, and that in these attacks the vomiting was out of all proportion to the pain in the head. The attacks were often preceded by chilliness.

ORIGINAL COMMUNICATIONS.

PRACTICAL NOTES ON
THE ORDINARY DISEASES OF INDIA,
ESPECIALLY THOSE PREVALENT IN BENGAL.

By Dr. CHEVERS.

(*Continued from page* 61.)

INDIAN RELAPSING FEVER.(a)

The question—Is Relapsing Fever a new disease in India? may, perhaps, be still open to controversy, but I think that we have strong evidence upon which to base the conclusion that it is one of the indigenous pests of the country, and that its history may be traced back at least to the middle of last century.

Relapsing Fever having been clearly recognised in Europe, especially by Drs. Henderson and Wardell, as a disease altogether distinct from Typhus, in 1842, when it became generally prevalent throughout the United Kingdom, was first distinctly observed and described in India by Dr. Robert Lyall in 1852-53.

I have given a brief abstract of Dr. Lyall's report of the fever which carried off large numbers of the inhabitants of the Yusufzaie Valley, situated about forty miles from Peshawar, in my chapter on Typhus, page 120, vol. ii. of 1879. The following were the chief characteristics of this disease:—It was epidemic, it was distinctly contagious, it was extremely prevalent, out of 226 houses in one village 131 were found to have been visited by the disease; and of the 949 inmates of these houses, 411 (or nearly one-half) were attacked by it. This fever presented a characteristic in which the Relapsing Fever of India has generally been found to differ from that of Europe—it was very destructive to life,—out of 410 attacked, 125 had died, and 126 remained sick when the report was made. At the commencement of the epidemic, jaundice was not an invariable complication; as the disease increased in prevalence, the body, in almost every instance, became jaundiced at about the fourth day, and a tendency to diarrhœa showed itself. Dr. Lyall wrote—"The most remarkable feature in this complaint is its tendency to relapse from two to ten days after the subsidence of the previous attack, without any irregularity on the part of the patient, in the way of exposure or diet, to account for it. These relapses are always attended with great derangement of the bowels, and often seem to depend upon a low degree of gastro-enteritis. A large number of people are carried off from the chronic dysentery arising from this cause. The convalescence in all is remarkably slow, and many months are always necessary before their health becomes anything like re-established."

(a) Read at the Epidemiological Society, January 7, 1880.

There were inflammation and suppuration of the glands in the groin, axillæ, and neck in some who survived the relapses. At the onset of the fever, quinine was not successful, but it was useful in the stage of relapse. The poor, uncleanly, ill-fed, and badly clothed and lodged were the chief sufferers. Thus, in the fever of the Yusufzaie Valley, we have displayed all the most distinctive characteristics of the Relapsing Fever of India—an extremely prevalent and destructive epidemic or endemic fever, arising among the poor and starved, and perhaps spreading to the well-to-do inhabitants by force of its contagiousness. The tendency to relapse is very marked, the convalescence is remarkably slow, there is generally jaundice, and quinine has no specific power as an antidote to the fever poison.

The fever observed by Dr. Lyall was clearly a disease very nearly allied to the Ictero-Hepatic form of Relapsing Fever, the Bilious Typhoid of Lebert, probably modified, as the Continued Fevers of India generally are, by the influence of marsh miasm. Thus it was noticed, in this and in other similar outbreaks, that "The relapses of the fever assumed the remittent or even intermittent type."(b)

India was long supposed to be as free from Relapsing Fever as from True Typhus. In the edition of his treatise on Continued Fevers of 1862, page 301, Murchison says—"In India, and indeed in all tropical countries, Relapsing Fever is unknown." Other leading authorities maintained the same opinion. But in his edition of 1873, page 328, Murchison fully admits the occurrence of this disease in Upper India.

We have strong grounds for believing that the disease which Dr. Lyall first recognised in 1852 as Relapsing Fever was then by no means a malady new to India.

In his report on Cholera, Mr. Jamieson has given a vivid narrative of an outbreak which ravaged Upper India in 1816. Throughout the Upper Provinces there prevailed most extraordinary drought and heat—such as had not been experienced since 1803. To the long-continued drought succeeded heavy and incessant rain, so that the whole face of the country was laid under water. The disease appeared among the natives in August, and raged epidemically in every city and town between Patna and Seharunpore. "It exhibited itself in the shape of a bilious remittent fever of a violent inflammatory type, accompanied, like the yellow fever of the West Indies, with suffusion of the skin." Its tendency was to terminate fatally at the end of two or three days. "The width of its range precluded the possibility of its being referred to any causes purely local." Its attacks were indiscriminate; "it seized equally Europeans and natives, and as readily entered the open and spacious house of the officer and civil servant as the crowded barrack of the soldier" [barrack accommodation in India was then generally very faulty] "and the low filthy hovel of the native." The mortality in the largest cities was very great. "Of numerous native villages nearly the whole population was ill at one and the same moment, and many of the shops were shut for want of people to attend them. The banks of the river were covered with the dead and the dying." "In Delhi, of two native corps alone, there were five hundred men at once sick in hospital." The European troops suffered quite as severely. "Of the European flank battalion, 648 strong, stationed at Allahabad, 305 men were attacked during October; early in November there were, at one time, 180 rank and file and twenty women and children on the sick list; and, in the whole, only seventy men of the seven companies of which the corps consisted escaped the disease. But Cawnpore was the principal seat of its ravages amongst Europeans: of four King's corps, the 24th Regiment L.D., 735 strong, and the 14th, 66th, 87th Regiments of Foot, 852, 813, and 702 strong, then in cantonments, there were, from first to last, nearly one thousand persons taken ill. The disease here began in August, prevailed during the three succeeding months, and did not finally withdraw until the setting in of the cold weather in December. It was at its height in September and October; eight or ten, or sometimes even fifteen men then died daily. The 87th and 66th Regiments suffered dreadfully; from the time of their reaching the station they lost nearly four hundred men. The former corps is said to have had 119 in hospital at once, to have buried twenty-one persons (including women and children) in one day, and upwards of ninety of its number within a month." "This," adds Dr. Jamieson, "is a degree of mortality far exceeding anything then on record in the medical annals of Bengal."

Considering that this report was written twenty-six years before Relapsing Fever was recognised in Europe, and remembering that other Indian fevers are not characterised by a tendency to relapse, the following statement made by Mr. Jamieson must, in connexion with the rest of its history, be taken as clearly showing that this malady was Indian Relapsing Fever. "It has been stated that the disease abated in December" [it commenced in August]; "so early as the end of November its attack had become less frequent, and its symptoms milder; *but relapses were still common*,(c) and it was very difficult to counteract the extreme debility invariably consequent on the attack."

It is particularly noteworthy that the first visitation of the Pali Plague prevailed in Western India from 1815 to 1819, and that the outbreak of Relapsing Fever described by Jamieson occurred in the Upper Provinces only a few months previous to the commencement in Bengal of the great Cholera epidemic of 1817. So also when, in 1836, the Pali Plague, commencing in Marwar, spread rapidly and attacked thirty-two villages of Mewar, a destructive fever, which must have been Relapsing Fever, made its appearance in the town of Bareilly,(d) and committed serious ravages in Rohilkund, in Mynpoori, and in the districts around Delhi. In tracing the history of Relapsing Fever in India, it is interesting to observe that, in his narrative of the outbreak of this disease at Bareilly, Mr. Guthrie states that "It is reported that about the year 1818 [when, it must be repeated, Pali Plague prevailed in Western India], during the medical charge of Mr. Evans, a similar fever prevailed, sacrificing 300 victims; reappearing under Mr. Browne in 1818, and causing great mortality from July to September; and that it also paid a passing visit, under Mr. Rhodes, in 1834, of only a few days, destroying eighteen convicts." The reports show clearly that this disease was contagious, but not so extremely contagious as the fever of 1816. Mr. Guthrie says on this point, "As to its infectious character here, within certain limits, I have no doubt but it has laws of its own. When the town was devastated by it, the convicts had it not among them, but now it is *vice versâ*." Jaundice usually characterised this fever, the eyes being of a deep saffron colour. The disease was not, at its outset, amenable to quinine; severe pains in the bones were grievously complained of; there was great tendency to bowel irritation; recovery was extremely slow. The malady prevailed almost exclusively among the poor and among prisoners crowded into ill-constructed and deficiently provided jails. Dr. Stewart, of Moradabad, wrote, "Persons living in well-ventilated places entirely escaped this epidemic," and "Persons who could afford themselves good food, even though living in indifferently ventilated situations, provided they avoided exposure to the infection, also escaped." Most of the medical officers reported very unreservedly upon "the ill-housed, overcrowded, badly clothed, and ill-fed condition of the prisoners." The destruction of life was very great. Mr. Shirreff reported that, at one village in the Panipat district, nearly two hundred persons died, out of a population of five hundred families, within six weeks; at another place, two hundred and thirty were said to have died within twenty-seven days out of a population of some one thousand inhabitants. In one division of this village, almost everyone who was attacked died. Between October and February, inclusive, the monthly range of deaths was from 19 to 32 out of a body of sick averaging from 90 to 245. Considering that, at that time, Relapsing Fever had not been differentiated, the evidence that this was the Relapsing Fever of India is very strong. Shirreff noticed that, in the Panipat and Rhotuck Districts, "In the majority of cases the fever runs its course till the 7th, 8th, or 9th day." Macnab says that, at Mainpuri, "When the disorder proved fatal, the issue did not long remain doubtful; the course towards this consummation was run over rapidly, and five or six days may be given as the maximum period." Some were

(b) *Vide* Dr. Lyall's and Dr. Farquhar's reports on this fever—*Indian Annals of Medical Science*, No. 3, page 16, and No. 4, page 504. It will be well that readers who are not experienced in the diseases of India should, as far as possible, consult and study the originals of the many valuable reports to which I shall have to refer, and of which the scope of my notes permits me only to give brief abstracts.

(c) The italics are mine.—N. C.

(d) The history of this disease will be found in the following reports:—Hugh Guthrie (Bareilly), *Transactions of the Medical and Physical Society of Calcutta*, vol. viii., part ii., page 189; and of Dr. D. Macnab (Mainpuri), *ibid.*, page 230; and those of Stuart, Spencer (Moradabad), and Shirreff (Delhi Territory), in Dr. James Rankin's "Report on the Malignant Fever called the Pali Plague," pages 196 *et seq.*

dealt with much more summarily. Spencer says, in describing the disease at Moradabad, "The patient died sometimes on the 3rd, but more commonly on the 4th to the 6th day." It is to be borne in mind that, unlike the allied disease in Europe, the Relapsing Fever of India is of such extreme deadliness that it frequently destroys the patient so early that the tendency to relapse cannot be observed in many cases. Thus the reports show that many died early in the disease from head, chest, and abdominal complications; and Guthrie wrote, "Many die in the first paroxysm, completely overpowered, as if the powers both of body and mind were at once blighted. This tendency to sudden death, from shock, immediately the malady, in its overwhelming power, strikes the patient down, has been observed in Plague, in Cholera, and in Variola." Spencer, describing the Moradabad Fever, makes a statement which, standing alone, might be taken as sufficient evidence that this malady was Relapsing Fever; he says, "Many men suffered severe relapses which mostly terminated fatally": but, while I consider that our mass of evidence in favour of this view is quite weighty enough to enable us to dispense with this striking statement, it is, I think, clear from the context, that the writer used the expression "relapses" as synonymous with "sequelæ," which were here dysentery and large abscesses. But the evidence of Guthrie and Macnab on this point is very strong and direct. Mr. Guthrie had a convalescent hospital where those discharged from his fever hospital were accommodated and placed under the care of an assistant, who was ordered "*instantly as relapses occurred to send them back to the hospital bungalow*; from these again, as they recovered a little strength and power of digestion, a selection was daily made, and placed in another outhouse under the care of the native doctor of the Insane Hospital, who saw them fed, exercised, etc., and, if these *did not in five or six days suffer a relapse*, they were sent to the jail as cured. The grand difficulty was to restrain them from eating, as the indulgence in even a moderate quantity of solid food *re-induced the fever* or caused fluxes."(e)

Macnab wrote—"Low delirium was very common, and when a torpor supervened, the case might be considered hopeless. We at times, however, had cases where the stupor partially vanished, and the intellect became in some degree clear; but this gleam was evanescent, for suddenly a relapse would dissipate the illusive hope, and the patient fall back into a state worse than that from which he had partially emerged. If, during the first day or two of improvement, the slightest retrograde movement were made, hardly an individual recovered."

The above facts convey a very important lesson to the young practitioner. He must not resolve to deny that a fever which suddenly appears among the poor of the town, or the prisoners in his jail, is Indian Relapsing Fever—solely upon the ground that none of his earlier cases are marked by anything like the cessation of fever followed by a distinct relapse of fever. If the type is nearly that of an extremely severe remittent, with or without jaundice, and not amenable to quinine, and if there be substantial evidence of contagion, and the spirillum be detected in the blood, the disease is Relapsing Fever. Still it is clear that, whenever an outbreak of Indian Relapsing Fever is carefully observed throughout its course, positive evidence of the existence of the characteristic tendency to relapse will not fail to present itself.

As I have already mentioned, Dr. Joseph Ewart's experience when attached to the Meywar Bheel Corps, after he had observed cases of Typhus and True Enteric Fever in the Ajmeer Jail in 1855, led him to inquire, in the *Indian Lancet*, whether many of the so-called malarious remittents are not, in reality, Typhus, Typhoid, and Relapsing Fever.

The last commentary on Indian Fevers published by Dr. Kenneth Mackinnon(f) was a note on "Fevers with yellowness of skin," published in the *Indian Annals of Medical Science*, No. 7, 1857, page 155. It may be taken as a useful lesson to many of us to observe how—in reviewing, for a second time, Jamieson's narrative of the epidemic fever of 1816, and the accounts of the pestilential fever of 1836-37, and comparing this disease with the Yusufzaie Fever; and while manifestly yielding to the force of evidence towards the conclusion that these were outbreaks of Relapsing Fever, and frankly admitting that they could, at most, have been, if of miasmatic origin at all, only in part due to paludal influence—this admirable observer and absolutely truthful reasoner still clings to his old traditions, arguing that marsh poison acted here in combination with animal and vegetable filth; that Dr. Maxwell appeared not to consider the fever he saw at Dera Ghazu Khan contagious; that yellowness of the skin, glandular swellings, and hæmorrhage, which attended these fevers, assimilate them more to the plague than to any other disease; and adroitly urging that this deadly Indian fever can scarcely be identical with the by no means destructive Relapsing Fever of Europe described by Jenner. A careful perusal of these four most interesting pages will, however, show that his opinions had begun to change, and that, in all probability, he would have been among the first to recognise the true nature of the Relapsing Fever which made its appearance in the Jails of the North-Western Provinces in 1860.

Several years, however, had still to elapse before the occurrence of Relapsing Fever in the jails of Upper India was generally suspected. A very destructive contagious fever appeared in the Central Jail at Agra in 1860 and was described by Dr. Walker. It again prevailed, in a very deadly form, in the Agra Jail in 1864; and, in that and the following year, it appeared in the Jails of Umballah, Futtehghur, Allyghur, Jyrpore, Malwa, etc. It was described by the several reporters as true typhus, contagious fever, typhoid fever, and, in the words of the Sanitary Report—"Some again believe it to be identical with the Relapsing Fever of Europe." Dr. Gray, Dr. Beatson, and Dr. Dallas clearly recognised this disease, as it occurred at Agra, Lahore, and Umballa, as Relapsing Fever. The whole question was most fully and ably reviewed by Dr. David Boyes Smith in the *Indian Medical Gazette* for 1867 and 1868; and, although his verdict met with a good deal of opposition (especially from the Medical side of the Indian Sanitary Commission), he, I consider, brought forward very strong arguments in favour of the opinion that the Contagious Fever of the Up-Country jails was nearly identical with the Relapsing Fever of Ireland, Scotland, Germany, and America. Indeed the Sanitary Commission went so far as to admit that "the disease resembles the Famine Fever of Europe in many important particulars."

(*To be continued.*)

(e) The italics are mine.—N. C.

(f) I was wrong in saying, at page 363, vol. ii. for 1979, that the last of Dr. Mackinnon's writings on Indian Fevers was published in 1855.

OBSERVATIONS ON

THREE CASES OF SPASMODIC PARAPLEGIA.

By JAMES RUSSELL, M.D., F.R.C.P.,
Physician to the Birmingham General Hospital.

Case 2.—Spastic Paraplegia, slowly induced, of nearly six years' duration, then undergoing a sudden extension to the Grey Matter of the Cord, with High Pyrexia and Symptoms of Serious Constitutional Disturbance.

My second case is one of undoubted disease in the antero-lateral columns of the cord, involving most probably the pyramidal tracts principally. The symptoms, in their gradual approach and tardy progress, answered to the description, given by Erb and Charcot, of the group of spasmodic paraplegias. The morbid change was doubtless the result of some disease outside the cord itself, of which the presence was indicated by the dorsal pain spoken of by the patient, and by the very moderate degree of tenderness discovered by ourselves. One sees, in the history, the invasion of the tissue of the cord gradually proceeding, giving rise, first to muscular weakness, and then to spasm, as indicated by the dragging pain, which entered a rather early appearance in the history of the malady. The spastic condition afterwards increased, and in time completed the disablement of the unfortunate patient, so far as locomotion was concerned.

The most interesting part of the case was, however, the extension of the degenerative process to the grey matter—an occurrence well known to be not infrequent, though, as already noticed, Dr. Gowers suspects that in some of the cases the course of disease is in the opposite direction, being from the central grey matter to the white columns. In my patient the extension took place with all the severity of a very acute attack, with high pyrexia, and alarming constitutional disturbance. In fact the symptoms, both in their

severity and in the suddenness of their invasion, as well as in the complete extinction of all voluntary and reflex power in the muscles, which at once took place, closely resembled an access of the so-called infantile paralysis; the more so as the motor functions of the arms were at first seriously threatened. In another respect too an analogy was afforded with the acute disease I have just named; I mean in the fact that the destruction of the motor cells in the affected portions of the anterior horns was not universal, certain cells being preserved, as was indicated by particular muscles in the affected extremity resuming their condition of spasm after the first effect of the change had subsided, and retaining a certain amount of nutritive force.

The completeness of the change in the condition of the muscles of the limb, from a state of spastic rigidity to one of perfect "flabbiness," and the rapidity with which the change was effected, were very striking. It would appear as though an attack of complete central myelitis were at first threatened, but that the mischief speedily receded to the region of the lumbar enlargement. Here it seized first upon the grey matter on the right side only, but when the patient passed from under our observation it was slowly involving the opposite half of the organ. The occurrence of bladder-trouble and also of a certain amount of anæsthesia, pointing, as to position, to an origin in the lower portion of the lumbar enlargement, rendered it probable that in a certain district the entire grey matter was implicated.

M. C., aged forty, a woman with a history of good health, but of a hard married life, and of much exposure to wet and cold. Her family history is free from any evidence of important disease. Careful and repeated inquiry failed in justifying any suspicion of syphilis. She had never suffered any injury, and the only symptom of anything being wrong with the vertebral column was a degree of tenderness on percussing from the sixth or eighth dorsal spine to the second lumbar. This tenderness had greatly lessened eight months after her admission, though it could not be asserted to have left her.

Five years before admission, after much nursing of her husband at night and work by day, she began to feel pain in the middle of the back and at the bottom of the shoulder-blades. The pain was severe, but was limited to the situations just mentioned, and never passed round the body nor down the limbs. It lasted, with varying severity, for six months; it was worse after a hard day's labour, but did not prevent her from working. The only evidence of motor disturbance at that time was a sense of fatigue at night, with aching of her right leg. Subsequently (at an undefinable period) she had pain in the region of the right hip, lying between the groin and the intertrochanteric fossa. This pain used to occur suddenly, and sometimes caused her to fall, by "pulling her down." The pain, most probably produced by muscular spasm, has never left her, though its severity has varied.

In about a year's time (four years ago) the right foot began to drag when she was tired, and she had pain in the knee and ankle when she walked. Difficulty in walking grew on her very slowly; the left leg did not participate in the weakness until six months before she came under our observation; and with the weakness she had pain in the left knee and ankle, but she continued able to drag herself about her house by help of the furniture. I cannot obtain reliable information as to the period when the stiffness of the lower extremities first showed itself, excepting that it came on subsequently to the weakness in the limbs. Its decided increase was of about six months' duration when we first saw the patient, and was plainly an important agent in completing her disablement.

The only intimation of bladder-weakness commenced three months ago; it consisted in occasional incontinence: and it will afterwards appear that, excepting a singular attack of two or three days, no important increase took place in this symptom so long as she resided in the hospital.

The patient was admitted on April 25, 1879; she was then quite disabled from walking by the rigid condition of both lower extremities. With much effort she rolled herself out of bed, and when reared on her feet, crept, with support, a few paces forwards. Her posture in bed varied: sometimes she lay on her back with the lower limbs in rigid extension, the heels drawn up, and the feet more or less inverted, owing to weakness of the peronei; and when the leg was raised, the excessive action of the adductors tended to draw it across the opposite extremity. Not infrequently she was found on her side, with the limbs rigidly flexed; but in that case, if turned on her back, the extremities passed into a state of extension. The nutrition of the muscles was unimpaired, and her general condition was that of fair health and of a sound constitution.

With respect to the reflexes—the superficial were well marked in the right lower extremity, but were less so in the left. By pinching the tendo Achillis (skin and tendon) much pain was produced, the knee was abruptly bent, and the entire limb rolled inwards with marked inversion of the foot. This was the case principally on the right side, as indeed was true of all reflex and sensitive phenomena of abnormal character. The deep reflexes were fully developed, and in forcibly flexing the right ankle, pain ran up the limb to the thigh, confirming an observation by Dr. Gowers explanatory of the mode in which ankle clonus is produced. Sensibility to touch, temperature, and pain was normal, excepting that in the right lower extremity all forms of superficial excitement easily passed into pain.

The patient's condition underwent little change during the first five weeks of her residence in the hospital. The urine had been passed unconsciously not infrequently. On June 1, however, her bladder was found to be distended—whether in consequence of full doses of belladonna, which she happened to be taking at the time, was uncertain. This retention was followed immediately by a severe attack of vesical catarrh, with discharge of bloody and ammoniacal urine, requiring very careful attention to the condition of the bladder. During the attack the temperature rose one degree above normal. Twenty days after the commencement of the cystitis (June 20) the temperature began to rise, and by the next morning but one (22nd) had reached 105·6°. No cause could be assigned for this sudden increase of pyrexia; the condition of the bladder was steadily improving, but there was much abdominal pain with some vomiting, yet no reason to suppose that peritonitis had taken place. Moreover, the temperature, having reached its maximum, immediately began to fall, and on the morning of the 24th was at the normal standard. The general condition which accompanied the access of fever was very grave and threatening; but most significant was the circumstance that with the rise of temperature all rigidity left the muscles of the lower limbs, their joints became completely flexible, and no reflex movement could be produced in them; at the same time her upper extremities became so feeble that she could only just raise them from the bed.

With the occurrence just described an important change took place in the features of the case. The temperature having reached 99° on the 24th, fluctuated for four days, and then preserved permanently the normal standard. The arms speedily regained their usual force, and the only phenomenon observed afterwards relating to them (a significant one) was that the hypodermic injection of curare subsequently employed produced so much weakness in them as to render the drug inadmissible.

The reflexes, both superficial and deep, were thenceforward permanently extinguished in the right lower extremity, after a faint reappearance for a day or two; in the left lower extremity they returned, and even surpassed their former degree. The muscles of the right calf fell into a perfectly flabby condition, and all the muscles of the same limb became quite paralysed, except the adductors of the thigh and the inner ham-strings, which, as will be stated, retained their former rigid condition, keeping the limb in a posture of permanent flexion and adduction. Almost complete anæsthesia to touch also remained after the pyrexial attack in the dorsum and outer edge of the right foot and in the anterior aspect of the leg, whilst the sole of the foot and the calf of the leg retained their sensitiveness to contact; nor did the tenderness to surface-irritation, which had hitherto prevailed in the right limb, ever reappear.

With the change now described in the reflex and sensitive condition of the right lower extremity, atrophy of the muscles set in, and proceeded steadily, yet hitherto has spared, at least to a large extent, the inner ham-strings, the adductors, especially the gracilis, and the head of the rectus femoris.

The left lower extremity regained most of the condition it had presented before the attack which was the precursor of the changes in its fellow; the limb remained in rigid extension, whilst that of the opposite side was permanently flexed. In about ten weeks, however, afterwards, the left

calf was found flabby, and a slower process of atrophy than on the right side is now going on in this limb also, though sensation on the surface is preserved; the limb has also become more liable to forced flexion. The abdominal muscles are very rigid, and cramp-pain is often felt in them.

At the present time (December 28) the patient lies chiefly on her back; both legs are permanently flexed; the reflexes have greatly diminished, though they are not quite extinguished on the left side, and muscular atrophy has commenced in the left limb. The right calf has one inch less of girth than the left, and the right thigh one inch and a half. The poor woman has suffered almost constant severe pain in the right hip region, and also in all the regions of muscular insertion when the position of the limb has been altered. This pain—due, no doubt, to the dragging of the muscles—has nearly gone on that side, but on the left side renders any attempt at extension quite unbearable.

The urine is sometimes passed unconsciously. Unless the bladder is washed out about every third day it becomes loaded with pus. General nutrition remains good.

Mr. Priestley Smith reports on the discs—"The vessels contracting; partial atrophy. Both discs alike."

The only remark to be made about treatment is that the loins were scored with the hot iron, but without benefit; and that the hypodermic injection of curare up to one-sixth of a grain twice a day did not make much change in the muscular rigidity. Its use was then discontinued on account of its enfeebling muscular power in the arms.

The patient left the hospital early in the present month (January) in a hopeless condition.

(*To be continued.*)

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

ST. MARY'S HOSPITAL.

ANEURISM OF THE ASCENDING AORTA—ACUTE ENTERITIS AND PERITONITIS—DEATH.

(Under the care of Dr. BROADBENT.)

[Report abstracted from notes by Mr. E. A. Wood and Mr. G. R. Bull.]

James S., aged forty-seven years, a coachman, was admitted on December 19, 1879. His mother died of cancer; he had a brother and sister alive and healthy. Four years ago patient had an attack of rheumatic fever. His present illness, he said, began six weeks before admission, when he felt pain in the chest on the slightest exertion, and had a dry, hacking cough; he thought he had caught cold at this time. He became very weak, and about a month ago had a violent attack of vomiting, when he thought he brought up about three pints of blood. The attack came on about nine in the morning, and he became insensible and fell down. Whenever he walked he had a throbbing feeling at the mid-sternum. Three weeks ago he found difficulty in retaining food when swallowed. He had no difficulty in deglutition, but the food seemed to stick in the root of the neck "like a round hard ball"; it would then return, sometimes just as it was when swallowed, sometimes acid to the taste. This continued until admission, and quality and quantity of food made no difference in the result. He had lost much flesh during the six weeks of his illness, and had only had the one attack of hæmatemesis. Patient had been rather a heavy beer-drinker, and had formerly a good deal of saddle-work in connexion with staghounds.

On admission, patient is an anæmic-looking man (he says his colour was good before the loss of blood mentioned above); the tongue is moist, pale, and clean; pulse 68, easily compressible, regular, not full between the beats. There is to be seen and felt strong pulsation over the larynx, not communicated by neighbouring vessels, but apparently transmitted by the trachea from the chest, the pulsation being present along the trachea to the episternal notch, though less conspicuously than over the larynx. The jugulars on the left side and many of the superficial veins are full. Little pulsation can be felt in the left carotid; in the right, pulsation is very strong and plainly visible, and the right veins are not distended. There is tenderness, with decided wincing on percussion of the chest, especially all down the sternum and at the epigastrium; there is slight tenderness also in the upper inter-scapular region. No impulse can be felt at the apex of the heart; the first sound is sharp, the second inaudible at that place, but both sounds are normal at the ensiform cartilage. The lower edge of the liver comes below the ribs. The sickness of which he complained has not been noticeable since admission, but he states that he has great uneasiness after taking food, as if it had not entered the stomach, but was lying at the bottom of the gullet. There is a somewhat tubercular eruption over his forehead, covered with scales, and appearing to be of the nature of psoriasis.

December 22.—For the last day or two patient has complained of pain up the left side of the neck. He has not been sick since admission.

31st.—The aortic second sound is intensified as the stethoscope is moved away from the valves, and becomes particularly marked near the left edge of the manubrium; there is noisy breathing from intra-thoracic pressure on the trachea.

January 5.—Patient has been improving, but he still has pain and tenderness along the mid-sternal line, and especially at the ensiform cartilage and about an inch below it. He also complains to-day of some pain in the left side.

7th.—Last night he had a "shiver," and an aching in all his bones. The skin is hot and dry, tongue clean, and temperature 101·4° this morning. When the two radial pulses are compared they are nearly equal in strength when the hands are below the breast, but when the arms are raised the right gets much weaker.

8th.—Patient had an attack of diarrhœa last night, and this morning he complains of headache. A chalk and catechu mixture is being given.

9th.—This morning he complains of pain in both iliac fossæ, and the headache is worse. Tongue moist and not furred; temperature last night 102°, this morning 103·2°; pulse 90, regular but weak. The diarrhœa is better.

12th.—Some tenderness was made out about the region of the liver. Patient was very sick last night, the vomited matter consisting only of food taken. Temperature last night 104·3°, this morning 101°; pulse 102, small and weak.

13th.—About 5 p.m. yesterday he had a violent paroxysm of pain in the abdomen, and a grain of opium every four hours was ordered. He passed a quantity of foul-smelling, light-coloured motion of the consistence of thick gruel, which under the microscope showed the presence of a number of white corpuscles like pus-cells. The opium allayed the pain, but he had little sleep, and during his attempts at stool groaned as if in great pain. The tongue to-day is dry, clean at the edges, furred down the centre; pulse 114, small but regular. He passes very little urine. The abdomen is large, peculiarly tense, and hard and tender on pressure. There is little movement of the abdomen in respiration. Patient has occasional hiccough, and wanders a little now and then. Temperature last night 103·3°, this morning 99·8°.

14th.—Patient has passed the night in great pain, and opium has been given freely. Little urine is passed, and the bowels have not been opened since the 12th. Last night the temperature was 97·6°, this morning it is 96·8°. During the day he became weaker; in the afternoon he was sick, vomiting some dark brown fluid, and he died at 4 p.m.

Post-mortem, an aneurism of the ascending part of the arch of the aorta was found. It was about as large as a hen's egg; its anterior surface was firmly adherent to the sternum, its posterior part to the trachea; it contained some firm laminated clot, and nowhere showed signs of bursting; the vagi had not been compressed. There was considerable disease of the rest of the arch of the aorta and of the thoracic part of the vessel. The liver was large, pale, and soft, the outlines of its lobules indistinct, and there were some old peritoneal adhesions on its upper surface. There was general recent peritonitis all over the abdomen; in the lower part of the ileum there was a patch, about four inches long, of acute enteritis (probably the source of the pyoid corpuscles in the stools); the bowel here was deeply congested, and the peritonitis was more intense in this region than elsewhere, but there was nowhere any perforation.

Remarks.—The indications of aneurism were only obscure. The sac was not large enough to give rise to any extensive dulness on percussion, and being situated immediately

behind the manubrium, was covered by the resonance of this bone. The chief evidence was the loud second sound away from the course of the aorta, the compression of the left innominate vein, and the pulsatile movement of the trachea and larynx; this last, moreover, might have been communicated by a right subclavian of abnormal origin and course. The connexion between the aneurism and the enteritis is not very obvious, but the cause of the enteritis may have been embolism of a branch of the superior mesenteric artery.

ANEURISM OF THE ARCH OF THE AORTA—SYMPTOMS OF PRESSURE ON THE TRACHEA AND RECURRENT LARYNGEAL NERVE—RELIEVED.

(Under the care of Dr. BROADBENT.)

[Report abstracted from notes by Mr. E. A. WOOD.]

Henry B., aged thirty years, a coalheaver, was admitted on September 5, 1879. He was a strongly-built man, and stated that he had been accustomed to lift heavy loads. His family history was very good. About twelve months before admission he noticed that his right arm ached and felt weak, and that the veins of the arm and hand stood out very prominently; the pain also ran up the right side of the neck. Six months later he began to have a cough, and then first noticed a swelling near the right shoulder under the clavicle; both swelling and cough gradually increased, and expectoration was at first profuse, but afterwards stopped. His other symptoms went on until date of admission. He had never any difficulty in swallowing, but had a good deal of dyspnœa, which was always much increased on exertion; he had lost flesh considerably, but had always retained a fair appetite. The following are the notes of his state on September 5:—"The tongue is clean and moist. The pulses are not synchronous at both wrists: the right, slightly preceding the left one, is weak and regular, 96 to the minute; the left pulse is scarcely perceptible. The right carotid pulsation is normal; the left cannot be felt at all. The veins of the right arm are normal, and he does not now complain of pain in it. The cough is less frequent than formerly, and does not cause him much pain or distress. Breathing is stridulous over the whole of the front of the chest; there is marked dulness on percussion behind over the region of the upper dorsal spine. There is visible pulsation on the right side, extending over an area of two or three inches in front of the chest just to the right of the manubrium, causing a heaving upwards of the sternal end of the clavicle; no bruit is heard over it. There is pulsation at the intraclavicular notch, and a roughened sound is heard over the manubrium with each inspiration, absent when inspiration is suspended. Temperature normal. Urine normal."

September 15.—Patient has been kept at rest in bed, and iodide of potassium, ten grains three times a day, ordered. The cough has been troublesome, and there has been some viscid and clear expectoration, with black particles intermixed. Breathing is still harsh and stridulous, but a little less so than at first examination.

29th.—On the 27th the dose of the iodide was increased to fifteen grains. To-day, for the first time, no pulsation could be felt in the left radial artery. The cough is about the same, but the breathing is much less stridulous than on admission.

October 6.—The cough is rather troublesome. No aneurismal bruit can be heard over any part of the chest. The whole sternal end of the right clavicle still pulsates, and a throbbing pulsation is also felt in the intraclavicular notch, where the heart-sounds are heard with great distinctness. The left brachial artery can be felt easily; it is hard and cordlike, and evidently well filled by blood, but has not the slightest pulsation.

10th.—The cough is better, and patient is generally more easy. The temperature is now, and has kept hitherto, about normal.

22nd.—The cough and expectoration have again been troublesome; loud snoring rhonchi are heard all over the chest, and when breathing is suspended the first heart-sound is heard to be very feeble, the second slightly accentuated. He has perspired a good deal lately at night.

24th.—The pulse to-day can be felt plainly in the left wrist.

27th.—Breathing is again easier. Mr. Norton has examined with the laryngoscope, and reports: "All the entrance to the glottis is much swollen and œdematous, but the vocal cords and interior of larynx are not affected—the cords are widely dilated and both act equally. The pressure of an aneurism on the laryngeal nerves would account for his symptoms." His weight now is $10\frac{1}{2}$ stones.

29th.—The pulse in the left wrist can only be felt feebly. The artery is not distended and cordlike as it formerly was, but is difficult to find at all. The cough is less frequent, and his breathing is much easier.

November 20.—He has suffered once or twice from slight attacks of cough, but on the whole has steadily improved; the pulse is again imperceptible at the left wrist.

25th.—He now weighs 10 st. $10\frac{1}{2}$ lbs. Yesterday there was some slight swelling of the veins of the right arm, accompanied by shooting pain in the arm and hand. He now gets up every day and is able to move about.

December 3.—Patient left the hospital to-day with his breathing much improved, and the symptoms of aneurism for the present latent.

He is at the present time attending as an out-patient, and on January 21 was still doing well.

Remarks.—In this case, while the obstruction of the left subclavian and carotid arteries and the pressure on the trachea pointed to aneurism of the transverse or descending part of the arch, the pulsating tumour was found to reach the chest-wall, at a part at which usually any aneurism presenting belongs to the ascending aorta or the first part of the arch. Great improvement took place, so that at last the diagnosis of aneurism would not have been very easy, and it continued after he had left the hospital. Laminated clot had evidently been formed either through the influence of the iodide of potassium and rest, or as a result of the partial arrest of circulation in the left subclavian and carotid arteries—a natural mode of cure which has led to surgical imitation of the process by ligature of these vessels.

A CASE OF CHRONIC CEREBRAL MENINGITIS—DEATH.

(Under the care of Dr. BROADBENT.)

[Abstracted from notes by Mr. E. A. WOOD and Mr. G. R. BULL.]

Charles M., aged forty-three, a painter and grainer, was admitted on December 13, 1879. He was rather perverse and irritable in his manner, and occasionally a little incoherent in his conversation, but was able to give the following account of himself:—"His father was killed by an accident; his mother died at the age of seventy-five, of old age, and one of his sisters died of consumption. As far as he knew there was neither gout nor rheumatism in his family. He was married and had two children alive, the eldest of whom was thirteen years old. He had been a painter all his life, and had occasionally suffered from pain in the abdomen and constipation, but not lately. While working at Alexandra Palace, about eight years ago, he had a fit, and was then taken home and remained in bed for three days, and did not return to work for six weeks. His present illness began about a month ago with frontal headache, which has been constant and increasing until admission. In aspect patient is somewhat anæmic; he has a blue line along the gums, and his breath his offensive. The tongue is furred and moist, appetite is good, the bowels are open regularly; he is very drowsy, and can walk quite well by himself. Temperature 100·6°; pulse 80, full between the beats, and somewhat compressible; urine acid, no albumen, specific gravity 1027. No cardiac impulse or apex-beat is perceptible; the first sound of the heart is very feeble, and so also is the second sound at the apex and base. Lung resonance extends over the heart nearly to the lower costal cartilage. The expiratory murmur is audible over both lungs; this is probably due to emphysema. On examining the eye with the ophthalmoscope, one or two points of extravasation can be made out in the retina.

December 19.—It was noted on the 17th that when up patient had a very staggering gait. He remains in a drowsy condition and ignores anything he is told to do or not to do. He is very perverse, and struggles if any attempt is made to examine him. He has not passed water all day, and a catheter had to be used this evening. He has to be fed, as he will not help himself in any way. His bowels are constipated, and he will not get up to go to stool. Temperature normal.

22nd.—The temperature has kept about 99° or 100°, but on the 18th it rose in the evening to 101·6°. On the 20th,

while being examined with the ophthalmoscope, he struggled and knocked his hand against the lamp, burning himself slightly; he expostulated with the clerk for holding the lamp in his way, and seemed to know what was going on, but afterwards turned round in bed and became sulky and apathetic. His wife has given a somewhat modified account of his illness and previous health. She says that he had gastric fever at the age of twenty years, and was always a very stubborn and unruly man. The accident at the Alexandra Palace occurred when he was on a ladder, and he fell about twenty-five feet on to some boards. He was insensible for about twenty minutes then, and for some months afterwards had frequently a peculiar twitching of the right thumb, which would rapidly extend up the right arm and disappear in a second or two. This symptom came on at first at intervals of a week or two, occurring only once at a time; latterly it has increased in frequency, occurring occasionally two or three times a day, and patient used to say that worry would often bring it on. Two years ago he had another fit of insensibility, which attacked him suddenly while at work; no details were known as to its duration or as to presence of convulsions, and he had no medical attendant during any of these illnesses. His present illness, his wife also said, began with sweating and slight diarrhœa, then intense headache, "worse than ever he had in his life." He had also a pain round his waist, and complained of being dreadfully cold—to such a degree that he hovered over the fire with coats piled on him. Then he became very drowsy, would not wash or do anything for himself, and lost his appetite.

January 1.—He has not improved. The bowels have been very constipated, and purges and enemata have been given. He has now two bed-sores which have developed very quickly; one is on his left hip, and the other opposite the centre of the sacrum. The apathetic condition continues.

4th.—Patient now does not know anybody. He takes what food is given to him, but will not help himself. Pulse in the morning 114, weak and regular; respirations 28. Some urine containing a large quantity of blood has been drawn off from the bladder by means of the catheter. His bed-sores are much worse. Patient got worse during the day, and died at 10.45 p.m.

At the post-mortem examination the veins of the cerebral surface were found especially much distended over its posterior half, and less markedly so over the anterior half. The arachnoid was dim; there was no general flattening of the convolution, but there was a slight flattening over the left frontal lobe in the angle between the marginal and ascending frontal convolution. At the base the pia mater, especially at the fissure of Sylvius, was very thick from inflammatory exudation, which was very tough and, seemingly, organised. There were no tubercles, and no thrombosis of arteries. The pia mater was adherent to, and without tearing could not be separated from, the lower half of the left ascending frontal, the posterior half of three transverse frontal, and the central third of the ascending parietal convolutions. The thickening consisted of a firm, semi-translucent material like organising lymph. In the deeper parts there were some caseous matter and calcareous granules. The convolutions removed were welded together by the exudation. Nothing else abnormal was found.

Extra-Medical Application of Localised Thermometry.—Prof. Broca relates the following circumstance, which shows how a scientific idea sometimes leads to the most unexpected practical application. One evening, at the time when he was engaged in his investigations on localised thermometry, he perceived after he had gone to bed a smell of smoke, and on carefully examining the room he observed at one point of the flooring a sensation of heat. On applying the thermometer at this point he found, in fact, a very notable elevation of temperature as compared to other parts of the floor. The firemen, who were sent for, seeing no appearance of flame, were somewhat displeased at having been called in for nothing, and were about to retire, but Prof. Broca insisted that the flooring should be taken up at this point; and this having been done, both flame and smoke rushed out, proceeding from a beam which was undergoing slow combustion.—*Gaz. Méd.*, January 24.

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Medical Times and Gazette.

SATURDAY, JANUARY 31, 1880.

THE UNIVERSITY OF LONDON.

The idea of using the University of London as a means for draping respectable mediocrity of intellect and medical attainments with the degree of Doctor of Medicine certainly does not seem to be a happy example of "a happy thought"; yet it may be well to consider whether the medical degrees of that University might not and ought not to be more readily obtainable by students and practitioners. It cannot be denied that in England men who choose the profession of medicine as their life-career are at a great disadvantage, when compared with Scotch and Irish students, as regards the possibility of obtaining a degree in medicine; nor that great numbers of Englishmen would gladly take a degree if they could obtain it without any great additional expense of time, labour, and money. The old Universities of Oxford and Cambridge are, it hardly need be said, altogether out of the question for all but a very few of intending medical practitioners; and Durham, besides its situation far north, is hardly to be described as a medical school, even were its degrees more highly esteemed: so that practically the only University available to the mass of English medical students is the University of London; and the doors of that examining and degree-conferring body are closed against all but a very few—closed by its special Matriculation Examination, and its requirements as to curriculum and sequence in time of the other examinations.

Now, we do not think that the Matriculation Examination is too severe, or requires a higher amount of general education than is desirable in every man who aspires to a degree in medicine; but it is certainly beyond the powers and attainments of the vast majority of the lads who come up to study at the medical schools in London. How many—or rather, how few—are the schools in England at which youths can be prepared to pass, at the age of seventeen, a good, or indeed any, examination in the Latin language, with grammar, history, and geography; any two of the

following languages—Greek, with questions on grammar, history, and geography; French and German, with questions in grammar; the English language, English history, and modern geography; mathematics; natural philosophy; chemistry? We venture to say that there are as yet very few boys' schools in the country where natural philosophy and chemistry are taught, or are at any rate so taught as to enable a lad to pass this examination in them. Here is the first great difficulty, and the chief reason why so very few medical students go up for this examination, but are contented to pass one of the Preliminary Examinations conducted or accepted by the College of Physicians, the College of Surgeons, or the Society of Apothecaries.

This difficulty, then, closes the doors of the London University against English medical students as a body, and closes them for ever; for very few can afford to delay entering on their professional studies in order to work up especially for the Matriculation, and only a man of very exceptional gifts and powers can combine the two. The doors are also closed by the curriculum-requirement against the practitioner who, ambitious of a degree, might make time to work up for the examinations of the University, but could not possibly go through, for a second time, the whole curriculum of attendance at a medical school and on hospital practice. The question then arises—was it intended that the medical degrees of the University of London should be open only to the few who, from the narrow extent of subjects taught in our schools for general education, can with any possibility of success present themselves at the Matriculation Examination when they wish to commence their professional studies; or was it intended and hoped that any considerable proportion of English medical men—say most of those above the very rank and file of the profession in intellect and power of work—would be induced to strive to become graduates of that University? If the intention was that its degrees should be "distinctions and rewards such as may incline (students) to persevere," we must believe that the fact that it affiliates each year only a very small percentage of English medical practitioners shows that it is, *quâ* its medical degrees, a disappointment and a failure. That granted, it follows that the medical profession have a legitimate and just cause of complaint against the University. It might have been a very powerful medical body, in which the whole profession in England felt a living, active interest, and of which they were proud; and it is one for which but a very few, comparatively, can care very much, and from which the far greater part feel hopelessly excluded. Can this state of things be remedied? We think it can, easily, and without really lowering the value and standard of the degrees of the University, which is the last thing we should wish. Let the University accept the *ad eundem* principle as regards its Matriculation Examination and its curriculum. At present it stands loftily aloof, and refuses to recognise any other examination, or Arts degree even, in place of its own Matriculation Examination (except, indeed, a few Indian and Colonial degrees, about the real value of which it cannot know anything), and any curriculum of medical studies except its own. Let it accept some of the preliminary examinations, which are accepted everywhere else, in place of its own. It may pick and choose among them as carefully as it likes. Or, should it be too much to expect it to stoop from its dignity of isolation so far as to make such a practical acknowledgment of the existence of other examining bodies, let it reduce the extent of the subjects of its Matriculation Examination within the range of the teaching at the ordinary primary schools of the country. And it should admit to its further examinations any students, willing to face them, who have fulfilled the curricula of such medical authorities as the Royal Colleges of Physicians and Surgeons, or have complied with any further reasonable demands in this direction which may be made by the University. It is to be remembered that the University of which we are speaking has itself, under its existing constitution, nothing to do with teaching and training. Its proud functions are simply to examine, and to stamp the approved results; and we do not propose to it that it shall lower its standards of approval or lessen the significance of its stamps. It might even with advantage make its examinations more severe as regards practical and clinical tests than they now are. But we urge the University to make it more easy and possible for students to present themselves for examination. If the University of London will not move in this direction, some other University or Universities will probably ere long be created to meet more fully the wants of the profession in England. We are to have a new University in the North; one has been talked of for the West; there is a new one in Ireland, constituted on the basis of educational freedom; and others may follow: And we suspect it would not be difficult for such Universities to obtain leave to grant degrees in medicine, especially under a conjoint scheme, provided that the only body now extant, which could well serve for an examining and degree-granting institution for the whole kingdom, were to persist in continuing the present interposition of purely mechanical obstacles for the prevention of students from presenting themselves for examination.

THE CLINICAL SOCIETY.

On taking his seat for a second year of office as President of this Society, Dr. Greenhow addressed to its members the following observations:—

"I very sincerely thank you for again electing me as your President. I shall strive to justify my re-election by endeavouring, as far as I can, to promote the objects for which the Clinical Society was established; and I believe that I shall best advance them, this evening, by abstaining from trespassing upon your time with a formal address. Indeed, I could not say anything upon the subject of clinical science which is not familiar to my hearers, and has not been already well said by some of my predecessors in this chair. I may, nevertheless, be pardoned if I refer briefly to the nature of the work which at the formation of the Clinical Society it was proposed that it should undertake. The question is one which rarely comes before us, and I think the present occasion, when taking the President's chair at the commencement of a new period of office, a very suitable one for begging your attention to it. We shall be more likely to succeed in attaining our purpose if we keep our standard steadily in view. The Clinical Society was founded for the exclusive purpose of receiving and debating reports of interesting cases, and not for that of reading any other kind of communication, however interesting or important. There are several other societies to which such papers may properly be sent; and, as we have our own work cut out for us, we do not desire to intrude upon the functions or province of these societies. I think we shall do well to keep this fact always in view. Further, it was designed that the cases read before us were to be very accurately and fully reported as regards all their essential facts. There was to be—I quote almost the precise words of the original resolution, passed at the meeting when the Society was founded, and afterwards incorporated in one of the laws of the Society,—there was to be a complete record of the state of the patient when first seen, investigated according to the most approved clinical methods; a statement of the family and personal history of

the patient, including a narrative of his present illness previous to his coming under observation; a record of the state of the patient when last seen, or, in fatal cases, a record of the post-mortem examination; together with an abstract of the progress and treatment of the case since first observed. The first Council resolved, after due deliberation, that, as a rule, ten minutes would be long enough for ordinary communications, and directed the President to stop any paper which exceeded this length, until the Society had expressed its opinion as to the propriety of the communication being continued. Almost of necessity this rule has been liberally interpreted by your Presidents, who have sometimes allowed papers which seemed very interesting to be continued beyond the fixed time. It is possible that the rule may not always have been enforced with sufficient strictness, but it has undoubtedly tended much to lead contributors of cases to condense their reports; and I may observe that it does not follow, because a case as read before the Society is short, it may not, with the sanction of the Council, be amplified for publication in the *Transactions*. It may be most useful to detail many facts for future study and reference, which would, if read in full at a meeting, have so complicated the narrative that it would have been difficult to discuss it. If I may be permitted to offer a suggestion as to our future work, it would be to express a hope that we shall be able to devote a larger share of our attention to therapeutics. Accurate knowledge of the action of medicines is perhaps the greatest desideratum of the present day. This was one of the objects set before us by Sir Thomas Watson when he inaugurated the first meeting of the Society for scientific work; and I fear that the remarks which he then made are still not altogether inapplicable to medical practice. He said that it had been a life-long wonder to him 'how vaguely, how ignorantly, how rashly, drugs are often prescribed. We try this, and, not succeeding, we try that; and, baffled again, we try something else.' Now, nothing would conduce more to the accuracy of therapeutics than series of cases carefully treated upon a similar plan, and brought to the test of a searching debate before this Society. Improved methods of investigating disease have given greater accuracy to diagnosis; and, mainly from the labours of our sister—the Pathological—Society, our acquaintance with the effects of disease upon the organs and tissues of the sick, as seen after death, has of late years been greatly enlarged; but our knowledge of the precise action of drugs and other appliances for the treatment of disease still leaves much to be desired. I said last year, on taking the chair as President, what is, I believe, universally admitted, that the Society has already done good service; but I also expressed a hope that we should all of us endeavour to do still better. It is with the aim of enforcing, as far as I can, this view that I have ventured to submit these remarks to your notice."

The above remarks will be read with satisfaction by many who are not members of the Clinical Society; whilst to those who belong to that body they hold forth both warning and encouragement. Some short time ago we took occasion to point out that this, the youngest and perhaps most vigorous of our societies, needed guidance almost as much as urging onwards. It has undoubtedly done good service, but it might do still more, and in this direction Dr. Greenhow's observations ought to do good. One of the earliest movers in the formation of this Society, Dr. Greenhow has ever been one of its most indefatigable supporters, and there is no one better qualified to speak of the objects had in view by the original founders of the Society. It is not to be denied that the Clinical Society has to a certain extent broken away from the lines marked out for it by those with whom it had its being, especially in the nature of the papers read. In many instances these have rather been of the nature of short essays on medical and surgical subjects, tagged on to one or more cases, rather than the well-digested clinical reports which the original members had in view. In short, the Society has tended to assume the character of a kind of Junior Medico-Chirurgical Society rather than of a body whose work was to be of a purely clinical character. Especially, as it has been said, was the work intended to be therapeutical; yet therapeutics, in the sense of the uses and values of medicinal remedies, are almost tabooed in the Society. True, anything like satisfactory work in this direction is very difficult, but there are several problems which occur to us at the moment that one would think admitted of something like definite settlement. To take an example: not very many meetings ago, a question arose concerning salicylic acid; no one seemed to have any clear notions of the differences between the effects of salicin and salicylic acid, whilst there seemed to be an equal difficulty as regards the action and effects of salicylic acid and salicylate of soda, and as to whether these differences, if any, were a mere question of dosage. No one seemed clearly to appreciate whether there was any danger in giving salicylic acid at all. Surely such points as these might be settled by the conjoint action of the members of a body like the Clinical Society.

No better illustration could be afforded of our meaning than an incident which occurred at a recent meeting of a sister society, where the treatment of aneurism of large arteries was under discussion. Two distinguished surgeons spoke of having used subcutaneous injections of ergotine in such cases, apparently on the sole ground that it had been recommended on high authority. We had thought the days of Authority had been past, but this would seem to indicate that such is not the case. Now, if ergot has any action at all over bloodvessels, it is over their muscular coat. The merest tyro knows that these muscular fibres are most abundant in the minute arteries, being almost entirely or totally absent from arteries of the largest size. The only effect of ergot therefore would be to cause contraction of the more minute bloodvessels, thereby increasing the obstruction to the blood-flow in them, and thus the tension in the larger vessels—an end most earnestly to be deprecated in the treatment of aneurism. From another point of view the suggestion might be compared with one for tying the plantar artery for aortic aneurism.

Can there be anything more contradictory than the doses of the same drug prescribed, apparently for the same purpose, by different individuals? This was notable in the report of the Chloral Committee, doses being quoted which some would consider ridiculously small; others which a different set of men would call dangerously large. This work of giving us certain standards as regards doses might again be helped by the Society's efforts, without aiming at a uniformity which would partake of deadness rather than life.

As regards surgical treatment the Society has not been so remiss. We have had at least the elastic ligature and saw *versus* mallet and chisel, with sundry like ennobling themes, *usque ad nauseam;* but there has been a marked tendency to ride the hobby for the time being to the very death. In their treatment of these surgical hobby-horses we have often been reminded of Rabelais' tale of Diogenes and his tub, where the philosopher, to show his industry, put his dwelling through every conceivable and inconceivable manœuvre until exhaustion supervened. But all this may be mended, and, whilst following the even tenor of its way, the Society may well devote some of its time and energies to the exploitation of some of the bye-roads of medical and surgical therapeutics.

PYROGALLIC ACID AS A REMEDY IN SKIN DISEASES.

During the year 1879 experiments have been made at Vienna, Paris, Breslau, and elsewhere with ointments containing pyrogallic acid instead of chrysophanic acid, and with good results. Psoriasis is the disease in which it has been chiefly used, and the most convenient strength has been found to be that of one in ten. Most of those who have tried it—for instance, Professor Hebra (*Wiener Med. Presse*, Nos. 43, 44, 1879) and Professors Besnier and Vidal of the St. Louis Hospital (*France Médical*, March 12 and July 5, 1879)—prefer the remedy to chrysophanic acid. They find that, though its action is slower, it has the advantage over the latter in exciting scarcely any inflammation in the part to which it is applied, and in staining it but slightly, the brown colour produced by it quickly disappearing. Its price is also said to be less than that of chrysophanic acid. Hebra finds that a patch of psoriasis treated with pyrogallic acid ointment takes from one to three weeks to disappear. He has used it also in tinea tonsurans, in lupus vulgaris, and in syphilitic papular eruptions. The lupus nodules are destroyed in about three days, probably, as we shall see directly, owing to the affinity of the acid for oxygen. Hebra has never yet seen any poisonous symptoms follow its application to the skin, although in his cases it could always be detected in the urine. A case has, however, been lately reported by Dr. A. Neisser (in the first number of Leyden and Frerichs' *Zeitschrift für Klinische Medicin*), where a patient died from pyrogallic acid poisoning in the skin clinic at Breslau. He was a robust man suffering from psoriasis of the whole body, and was certainly not experimented on with much caution. One half of his body was painted with chrysophanic acid, the other with 10 per cent. pyrogallic acid ointment. Six hours after, he had a severe rigor attended with vomiting and collapse. The symptoms then subsided, but returned in about forty hours, and from that time he never rallied, but became comatose and died on the fourth day after the painting. The peculiarity of his urine, of which he only passed about one litre and a half during his illness, attracted attention. It was dark brown, and deposited a thick sediment, which consisted of a very abundant blackish-brown substance, partly amorphous, and partly in the form of drops or casts, but it contained no blood-cells. The spectrum showed the characteristic bands of hæmoglobin, and similar *débris* to that in the urine was found in the blood itself and in the renal tubules. There could be no doubt, in fact, that it consisted of disintegrated red corpuscles. Dr. Neisser now experimented on rabbits both with chrysophanic acid and pyrogallic acid, and, after proving the harmlessness of the former, discovered that the latter, in moderately poisonous doses, causes rigors, dyspnœa, tremor of the limbs, general weakness, and hæmoglobinuria, with the same changes in blood and urine as were found in his patient. The animals may recover if the dose is not excessive, but with a large dose they die with all the above-named symptoms *plus* the alterations of the blood corpuscles, but there is no hæmoglobinuria. With a very large dose (two grammes of acid per kilogramme of body weight), to which they generally succumb in about two hours, there is neither hæmoglobinuria, nor can disintegrated blood-cells be detected in the blood; the latter, however, is either blackish or chocolate-coloured, and sometimes of the consistence of jelly. Dr. Neisser explains the poisonous action of the acid on man and animals by its avidity for oxygen in the presence of alkalies, and the consequent destruction of the red blood corpuscles, which are the carriers of oxygen. The hæmoglobin thus set free is dissolved in the plasma of the blood, and the corpuscular *débris* remains suspended in it, and is in part excreted by the kidneys. He considers that the infarction of the latter does not directly cause death by retention of the urinary constituents in the blood, but by delaying the excretion of the pyrogallic acid from the system, and so prolonging the period of its deoxidising action. It seems to us, however, that where death follows maximal doses it must be directly due to so large a destruction of red corpuscles that those which still remain intact are unable to satisfy the need of the organism for oxygen, and there is not even time for the appearance of hæmoglobinuria. Dr. Neisser considers that the external use of pyrogallic acid should be restricted to the head and face, chrysophanic acid being still retained for the skin of the trunk and limbs. Theoretically, transfusion with simultaneous venesection would be the rational treatment of the poisoning, and active measures should be taken as early as possible to promote diuresis, and clear the renal tubules of *débris*. After all, however, the number of individuals liable to be poisoned by pyrogallic acid may be limited, just as the number of those who die from chloroform is; but there is no doubt it is a drug which cannot be safely played with.

THE WEEK.

TOPICS OF THE DAY.

The Board of Trade inquiry into the alleged obstruction of the navigation of the Thames, by the formation of mud-banks from deposits of sewage from the metropolitan drainage, was continued at the Westminster Palace Hotel last week. This was the eighteenth day of the sittings, and since the last meeting the Thames Conservancy have put in a mass of chemical evidence as to the nature of the banks which have been formed. Upon the present occasion Dr. Frankland and Dr. Tidy, with other witnesses, gave evidence, showing that, in their opinion, these mud-banks had been formed from sewage-mud. Dr. Frankland stated that he had analysed samples of deposits taken from the natural bed of the river at several points from above Hampton Court to Barking and Broadness, and he had come to the conclusion that the mud of the banks below the sewage outfalls differed essentially from the mud of the Upper Thames and from that of the tidal estuary. Mr. Bidder then proceeded to open the case for the Metropolitan Board of Works; and Sir Joseph Bazalgette, as engineer to that body, explained his views on the subject at some length. He was followed by Mr. H. Laws, C.E., who gave an opinion that the formation of the banks was due to the dredging operations of the Conservancy Board. The inquiry was then adjourned from day to day until Saturday last, when it was announced that no meeting would take place for five weeks.

The Liverpool Town Council appear to have no intention of abandoning or modifying their scheme for procuring an amended water-supply for the town, although so many neighbouring Boards are combining to oppose it. At a special meeting held at Liverpool last week to confirm the resolution in favour of the Vyrnwy scheme, which has been endorsed by a poll of the ratepayers, a memorial advocating delay was read from a local association of land and house owners. Mr. Wilson, chairman of the Water Committee, however, moved the following resolution:—"To consider and, if thought expedient, to confirm the propriety of promoting a local Bill in Parliament for obtaining the necessary authority to organise a supply of water from the rivers Vyrnwy, Marchnant, and Afon Conwy in Montgomeryshire, and to authorise and empower the Water Committee of the Council to incur all necessary costs and expenses in relation to such project." This was seconded, and, after some opposition, adopted by thirty-nine votes to eight. The opposition took the ground that, as placed

before the ratepayers, the scheme was to cost only a million and a quarter sterling, while now the estimate was three millions and a half. It was explained, however, that it was originally designed to seek powers for only the first instalment of the project, but the Corporation had since been advised that it would be better policy to seek the full powers at once, and have only one contest with the "interests," instead of several. A clause in the Bill gives three millions and a quarter as the estimated cost of the whole scheme for producing forty millions of gallons of water per day.

The report of the recent Dublin Hospital Sunday Fund collection was submitted to a meeting of the Committee held last week in Molesworth Hall in that city. This was the sixth annual meeting of the promoters of the movement, and was presided over by the Archbishop of Dublin, several medical gentlemen and others being present. The report stated that the Fund had increased from £3000 in 1874 to £4329 in 1879. The Attorney-General, in moving the adoption of the report, congratulated the promoters on the success obtained. Notwithstanding the extensive depression of the times, the Fund not only maintained its former level of the most prosperous year, but actually exceeded it. He expressed satisfaction at a suggestion in the report that efficiency in the nursing arrangements in each hospital should be regarded as an element to be taken into account in making the awards, and he also commended the decision of the Committee to keep the Hospital Sunday collection distinct from any Saturday Fund. The resolution was seconded by Mr. Hamilton, M.P., and supported by Dr. Houghton, who called attention to the fact that by means of this Fund many persons now contributed to the support of hospitals who never gave anything before, while, so far from diminishing the number of subscribers to these charities, the lists had actually increased. He advocated a larger expenditure upon the food of patients; and with respect to the proposed training of nurses he advised the Committee not to attempt to do too much, but to let their reforms be regulated by their means. The usual routine business concluded the meeting.

A singular action was tried in the Brighton County Court last week. Dr. Barker, a medical practitioner in that town, sued the trustees of the late Major Barry for £13 12s. The defendants paid £10 into court, the sum for which the plaintiff had already given a receipt in full of all demands, but had subsequently returned. The evidence showed that the defendants had represented that Major Barry had died insolvent, upon which Dr. Barker consented to take the sum of £10, as he was informed that unless he contented himself with that amount he would get nothing. After giving a receipt for that sum, however, Mrs. Barry called upon him, and in the course of conversation he related what had occurred. She indignantly repudiated the insolvency of her husband, and Dr. Barker at once returned the £10 to the trustees, and claimed the amount for which he had originally rendered his bill. The Judge ruled that the plaintiff, under the circumstances, was not bound by the receipt he had given, and ordered a verdict to be entered for him for the full amount claimed.

Dr. Hardwicke, the Coroner, last week held an inquest which is principally noticeable on account of the rider that the jury very properly appended to their verdict. A surgical instrument maker, aged sixty-one, had been ailing for the last twelve months, and had been under treatment at several of the London hospitals; he was also in the habit of taking chlorodyne on his own account. His wife deposed that he had latterly been very desponding in mind, fearing he would lose his trade, and had threatened to destroy himself. Mr. Warne, surgeon, of the Highgate-road, said that when called in to see the deceased he found him in a state of collapse, and he died shortly afterwards. There was no doubt that deceased had died from poisoning by chlorodyne. The coroner and jury had a long discussion as to the facilities for obtaining poisons, especially those quack medicines which are of a poisonous nature, and the jury eventually found a verdict in accordance with the evidence, adding—"We are further of opinion that the most stringent measures ought to be enforced to prevent the sale of poisons in the shape of patent medicines, and that at any rate it should be made compulsory that a label should be affixed thereto bearing the word 'poison,' as is compelled to be done in regard to the sale of laudanum and other poisons."

We give the details of the following case as a warning to members of the profession, and as an illustration of the wisdom of promptly meeting baseless insinuations with firmness and determination. A highly respectable practitioner residing at East Barnet, where he had been in practice for twenty years, received a letter accusing him of having chloroformed and ravished a female patient; the communication went on to say that all the facts of the case were in possession of the writer, but if the sum of £50 were forwarded to him to enable him to emigrate, nothing further would be heard of the case. The accused gentleman lost no time in placing the matter in the hands of the police, and, acting under their advice, he replied to the letter, and ultimately made an arrangement to send the money in a parcel to the address given, where the writer was arrested, and the replies he had received to his letters found upon him. At the trial, before Lord Justice Bramwell, at the Hertford Assizes, the prisoner, after the facts had been detailed, desired to withdraw his plea of "Not guilty," but he was not allowed to do so, and the jury immediately returned a verdict of "Guilty." The Lord Justice, after conferring with Mr. Justice Denman, expressed his intention of passing a very severe sentence on the prisoner; he characterised the attempt as the worst sort of crime that could be committed, and one which, if not resisted as it had been by the prosecutor, might ultimately have driven him to commit suicide, and he pronounced the well-deserved penalty of twelve years' penal servitude. At the conclusion of the case the police were highly commended on all hands for the very able manner in which they had conducted the case.

Meetings of the profession continue to be held to express the dissatisfaction which has been occasioned by the appointment of Sir Brydges Henniker as Registrar-General, in face of the claims for that post possessed by Dr. William Farr. At one of these gatherings, held at Bethlehem Royal Hospital, the chairman, Dr. Alfred Carpenter, of Croydon, informed his hearers that at the Council of the British Medical Association it had been agreed to send a remonstrance to the Government on the injustice done to Dr. Farr in this matter. It has been replied, that, whilst duly acknowledging Dr. Farr's services and merits, the whole question was considered by Government before Sir Brydges Henniker was appointed. That being so, the profession will best consult its own dignity by ceasing to make any further representations or remonstrances on the subject.

The sanitary inspector of the Whitechapel District Board of Works recently reported that he had received a complaint as to the filthy condition of the ground-floor of a house in King-street, Spitalfields. Upon visiting the place he found it occupied as a living and sleeping apartment by a man, his wife, and a daughter twenty-five years of age, who were all in a deplorably dirty state, the room being especially filthy in consequence of a number of cats being kept in it. Notice

was issued to abate the nuisance at once, but a second visit showed that nothing had been done. A compulsory order was accordingly signed by the chairman to enable the sanitary department to take steps for the forcible suppression of the nuisance. The inspector further reported that upon visiting some houses in Chicksand-street, Mile-end New Town, he found the ground-floor room of one of them occupied as a school by a foreigner; at the time of the visit there were thirteen children, besides the man and his wife, crowded into the room, which was nine feet square and six feet in height, so that the cubic space for each individual was only thirty-two feet! The room was in a filthy condition, and totally unfit for the purpose for which it was used. It is needless to add that the children looked very pale and sickly. Notice was served for the abatement of the nuisance, and the owner of the premises, who professed entire ignorance of what was going on, promised to prevent the place from being so used in future.

A severe epidemic of typhoid fever is reported to exist at Southend-on-Sea. The disease broke out a short time ago at Prittlewell, one of the suburbs, and has now assumed serious proportions. Between sixty and seventy cases are stated to have already occurred, several of which have proved fatal. A similar outbreak has also occurred at Barnham, a village a few miles from Southend.

Since the recent proceedings against the East London Water Company, which resulted in such heavy fines, it is stated that the supply of water to the Industrial Dwellings in the East London district has been in all respects satisfactory.

Among the many rumours flying about, as to the intentions of the Government with regard to domestic legislation in the approaching session of Parliament, is one which appears to be traceable to very credible sources, to the effect that the Select Committee on Medical Bills will be at once reappointed, and requested to report as soon as possible, and that the Medical Bill, or a Medical Bill, will be again introduced early; the Ministry intending to do their utmost to push it through. It would be a great boon to have medical legislation done with for a while, even should the Bill not be in all points a desirable one. But if the Government undertakes earnestly a Water-Supply Bill for London, a Coroners' Inquests Bill, and some other pieces of domestic legislation postponed last session, as Lunacy Law Reform, and above all the new Criminal Code, it will have its hands very full; and expiring Parliaments seldom, if ever, work hard or steadily.

DR. THORNE THORNE'S REPORT ON THE RURAL SANITARY DISTRICT OF DARTFORD.

Towards the close of last year Dr. Thorne was despatched by the Local Government Board to report upon the general sanitary circumstances and administration of the Rural Sanitary District of Dartford. As a result of his inquiry it may be stated that he found in many parts of the district a rapidly increasing population, generally due to the establishment of cement works, paper mills, etc., giving employment to a large number of hands, but in a few instances, as at Bexley, attributable to the construction of villas and residences for the occupation of persons having business engagements in the metropolis. In the majority of cases the houses built in the district, whether for rich or poor, did not fulfil the requisite sanitary conditions: some are built on sites which, from their wetness, should have been carefully avoided; and the common practice is to provide all new houses with a well and a cesspool in dangerous contiguity. The chalk in this district is, in most parts, very hard and free from fissures, and as long as the houses were sparsely scattered the cesspools and wells were kept well apart, but as houses increase in number, space becomes more valuable, and eventually this practice will be productive of very serious consequences. The greater portion of the district is within the area of the Kent Water Company, but in many of the parishes to which their mains extend the wells are still resorted to. Cesspool drainage is universal throughout the district, yet the West Kent system of sewerage, passing through Bexley, and the main sewer of the Darenth Valley Sewerage Works might be made available for nearly all the more populous localities in the district. The means adopted on all hands with regard to the disposal of excrement and refuse were found, as a rule, to be faulty in the extreme. In investigating the manner in which the Sanitary Authority and its officers carried on their duties, Dr. Thorne was enabled to point out many details in which improvements might with advantage be made. Whilst on the spot Dr. Thorne also instituted an inquiry into an outbreak of diphtheria which occurred in the parish of Swanscombe during the third quarter of 1879. Owing to the accidental omission of the Medical Officer of Health for the parish to report it, the epidemic was found to be at an end before the inquiry could be commenced. Moreover, the sick had been attended by at least five different medical practitioners, some of whom had not preserved any accurate record either as to the dates when the patients first came under treatment, or as to when they had first been attacked with the disease. It was, however, ascertained that thirty-two cases of throat affection, most of them being undoubtedly cases of genuine diphtheria, had occurred in Swanscombe during the months of July, August, and September last, and, including one case returned as croup, fourteen of them terminated fatally. Dr. Thorne sums up the results of his inquiry in the Dartford District as follows:—1. That conditions which are a source of danger to health obtain widely throughout the district. These conditions have already, in certain instances, been associated with the prevalence of preventable disease, and, being rapidly on the increase, are likely before long to become a far graver source of danger. 2. That numerous localities in the district either have already become, or are rapidly becoming, so populous as to stand in urgent need of more complete sanitary appliances. Especially do they need efficient means of drainage, proper water-supply, and means of excrement-disposal which shall be free from nuisance and from danger to health. One obvious comment on this report is that all the information contained in it ought to have been obtainable from the local Medical Officers of Health, instead of having to send down an Inspector.

CLINICAL EXAMINATIONS.

At the last "pass" examination for the diploma of membership of the Royal College of Surgeons, which was brought to a close on the 23rd inst., there were some very good clinical cases selected from the following metropolitan hospitals:—St. Bartholomew's, St. George's, St. Thomas's, Guy's, Westminster, King's College, and University College, as—tumour in the axilla; cancer of the tongue; disease of the radius; hydrocele; disease of the elbow-joint; syphilitic ulcer on the hand; disease of the palate; enormous hydrocele; disease of the humerus; hernia in inguinal canal; tumour in the neck; severe burn with cicatrix; chronic synovitis of knee; syphilitic ulcers on the leg; syphilitic iritis and psoriasis in same subject; old ununited fracture repaired; undescended testis; urticaria; hydrocele and psoriasis of sole in same subject; large syphilitic sore on the thigh; fractured patella; nodes on tibia; bubonocele; incipient hernia; rupture with undescended testis; gangrene of the great toe; hare-lip; parotid tumour; etc. There were in

addition two finely-developed men, stripped for the application of bandages in the treatment of supposed fractures, etc. The clinical cases averaged about twelve each evening, the examinations lasting from 5 to 7 p.m., when the pathological and surgical examinations were continued in the council-room and library. Those candidates who had not passed any examination in medicine at the College, or possessed of a recognised medical licence, had of course to undergo this additional examination before admission to membership; and it is interesting to notice that the licence of the Society of Apothecaries still carries off the palm in numbers, as out of the 128 candidates there were twenty-eight holding this diploma; the L.R.C.P. Edin. followed with five, the L.R.C.P. Lond. came next with four, L.K.&Q C.P. Ire. one, L.F.P.&S. Glasg. one, and M.D. Paris one. Of the 128 candidates examined no less than forty-eight were sent back for six months, and six were approved in surgery and when qualified in medicine will be admitted members of the College. The examinations for the present are brought to a close.

THE METROPOLITAN ASYLUMS BOARD.

At the usual fortnightly meeting of the Metropolitan Asylums Board, held last week, Mr. Galsworthy made a communication in regard to what has been called the "illogical judgment" in the case of Hill *v.* The Asylums Board, in the matter of the Hampstead Small-pox Hospital, in which the defendants have been granted a new trial on condition that they should pay the costs of the plaintiffs in the first trial. There had been reference to counsel for opinion, and communication with the Local Government Board in regard to the course which should now be taken; and the opinions and letters having been considered by the Board in committee, they were brought before the open Board. Mr. Galsworthy stated that the Government, in the interests of the ratepayers of London, and in defence of the principles upon which the Act of 1867 was drawn by Parliament in regard to the erection of asylums for the reception of the poor smitten with fever and small-pox, had authorised the Board to carry an appeal to the House of Lords against the late judgment. Mr. Galsworthy moved accordingly, and the motion was agreed to unanimously. The reports presented showed that in the Stockwell asylums—both used for fever patients—there had been 223 patients. Of these 67 had been admitted in the fortnight ending that day, and there had been 8 deaths in the same period. In the Homerton asylums—also used for fever cases only—there were 201 patients; of these, 145 were scarlet fever cases, and the large number of 56 were cases of enteric fever. These numbers were left in the hospitals at Homerton after 90 had been discharged in the fortnight and 6 had died. The number admitted since the last return was 55. Altogether there are now 424 fever patients under treatment, being a total decrease of 19 on the number at the last meeting. In the small-pox asylums of Fulham and Deptford there were 82 patients, against 79 a fortnight ago. During the fortnight 17 had been discharged, 4 had died, and 24 fresh cases had been received. There are in these asylums 488 beds available for small-pox patients, now vacant.

SURGEON-MAJOR PARTRIDGE, OF THE INDIAN MEDICAL SERVICE.

A farewell dinner was lately given at Calcutta to Surgeon-Major S. B. Partridge, of the Indian Medical Service, on the occasion of his well-earned retirement at the end of a lengthy and most meritorious career in India. About thirty of his brother officers of the Indian Medical Service were able to be present, and everyone seems to have vied with his neighbour in showing respectful admiration for the services and good qualities of the guest of the evening. Surgeon-Major Partridge is leaving India, after an active service of about twenty-six years—some of them spent in discharging the duties of the highest and most responsible positions. He was on active service all through the Mutiny, being one of the illustrious garrison of the Lucknow Residency. He was present at the battle of Kahnpur, and, a little later, at the "final capture" of Lucknow by Lord Clyde. He was then obliged to go to Europe, on sick leave, for six months; and ever since that time he has been attached to the Calcutta Medical College and Hospital, in which institutions he has held the highest positions as a teacher and surgeon, and gained the respect and esteem of all who came into contact with him either in a public, a professional, or a private capacity.

SOCIETY FOR THE RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

The usual quarterly Court of Directors of the above Society was held on Wednesday, January 14, in the rooms of the Royal Medical and Chirurgical Society. The chair was taken punctually at 5 p.m. by the President, Sir George Burrows. One new member was elected, two sent in their resignations, and the death of one was reported. Grants amounting to £1284 were made to fifty-nine widows, fourteen orphans, and three orphans on Copeland Fund. Fresh applications were received on behalf of one widow and two orphans. A legacy of £500 from the executors of Miss Hurst was announced by the Treasurer. The expenses of the quarter were £56 12s. On the motion of Mr. Steet it was resolved to propose to the next annual meeting an alteration in the by-laws, to extend and define more certainly the area of the operations of the Society, by making all medical practitioners residing within a twenty-mile radius of Charing-cross eligible to become members.

SÉNATEUR PAUL BROCA.

The *Union Médicale* thus comments on Professor Broca's election:—"On Thursday next the Senate will confer on Professor Broca the post of Senator for life, vacant by the death of M. de Montalivet. Great is the honour thus done to our science, of which M. Broca is one of the most eminent representatives. Our sincerest wishes are offered that his election will not be a cause for his descending from the serene regions of science to mix in the troubles of politics. It is true that by politics we arrive at everything; but has not M. Broca attained his end without the aid of politics? Does he aspire to the portfolio of Minister of Public Instruction? But his *confrère* Professor Paul Bert bars his way, and will hasten to say to him, 'After me, if anything remains.' And after Paul Bert he will have to count with M. Clémenceau, who has the great advantage over M. Broca of being an orator, which M. Broca is only in a less degree. Now, there is no doubt in the present time one must know how to speak. But without flattery we may say that the two heads united of Paul Bert and Clémenceau are not worth the single encyclopædical head of Paul Broca."

PATHOLOGICAL SOCIETY OF DUBLIN.

At the meeting of this Society on Saturday, January 24, the President, Dr. E. H. Bennett, in the chair, after the minutes of the last meeting had been read and signed, it was moved by Dr. Foot, seconded by Dr. Walter G. Smith, and unanimously resolved—"That the Pathological Society of Dublin take this opportunity of placing upon record an expression of deep regret at the death of Dr. Charles Benson, and of sympathy with his family in their bereavement. And that the Society do now adjourn as a mark of respect for the memory of Dr. Benson." The Society accordingly adjourned without transacting any business.

CHARCOT'S JOINT-DISEASE.

At the meeting of the Pathological Society next Tuesday, the interesting subject of joint-affections occurring in the course of Locomotor Ataxy will, it is expected, form one of the chief topics of discussion. Some living specimens will be introduced by Dr. Buzzard, and the President will show some bones and casts.

FROM ABROAD.

Professor Fournier on Alopecia.

The following is an abstract of a lecture delivered at the St. Louis by M. Fournier, and reported in the *Gazette des Hopitaux* for November 20 and 25 and December 30:—

Alopecia is an affection, he observes, concerning which the physician is constantly persecuted, and upon which prejudices prevail that it is of importance to remove, especially as regards the supposed relations between alopecia and syphilis. After adverting to alopecia as dependent upon lesions of the hairy scalp, the diagnosis and treatment of which are easy, he proceeds to say that there are five classes of alopecias unconnected with such lesions—viz., senile and precocious alopecia, the alopecia of convalescence, cachectic alopecia, syphilitic alopecia, and pelada.

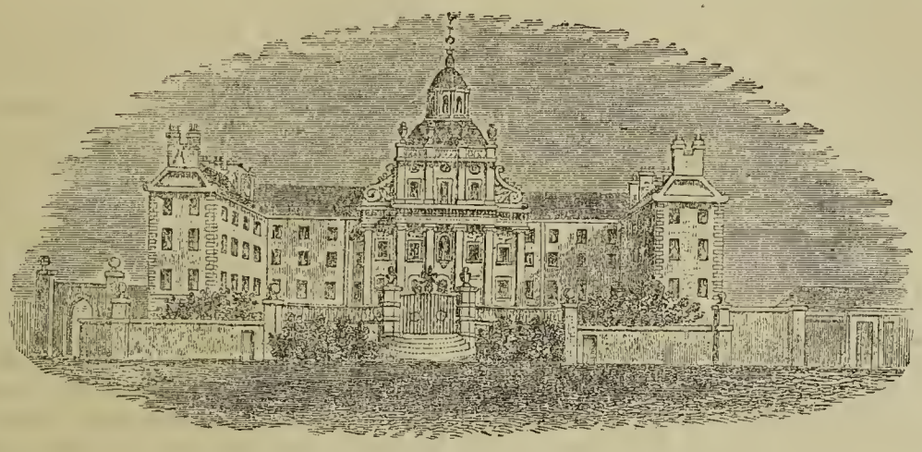
1. *Senile and Precocious Senile Alopecia.*—This is one of the consequences of age, commencing generally between thirty-five and forty years of age, but varying greatly in this respect; so that while old persons sometimes retain a luxuriant head of hair, others lose it prematurely, an abundant fall of the hair commencing at thirty, twenty-five, or even earlier. The causes of this precocious alopecia are various:—First among these stand gout and arthritis, so that it is a sign *par excellence* of the gouty diathesis. Next may be mentioned all debilitating causes having a prolonged action, excesses of all kinds which lead to a progressive wearing of the forces of the economy—intellectual labour, the abuse of women, onanism, habitual watching, excess at table, etc. We may meet with it just as well in the *savants* of the Institute as in those who abuse mundane life. Thirdly, anxiety, intense grief, preoccupations, wretchedness, or imprisonment, may prove causes of alopecia. But there are questions which we do not understand about it, as why men are infinitely more predisposed to it than women, and why certain families are more liable to it than others. There are influences of race and blood which remain unexplained; and why, in the absence of all debilitating causes, all diatheses, or any excess, it appears in individuals living under the best hygienic conditions, is a mystery. These two forms of senile alopecia are distinguished by three principal characteristics:—1. It is slow and progressive, not devastating the head in the course of some weeks or months, but proceeding slowly so as to occupy some years. 2. It is systematised, having its special well-circumscribed seat—the vertex, the precise place of the ecclesiastical *tonsure*, and towards the forehead, on the antero-superior part of the cranium, always respecting the lateral and posterior parts. The baldness is surrounded by a semicircle of hair, stretching from the temples to the nape. 3. It is symmetrical, being absolutely regular and elegant in its form, affecting both sides precisely alike, so as not to stretch even a centimetre to one side more than the other. "There is nothing ridiculous or malformed about it, and it confers upon the physiognomy an expression of wisdom, experience, and venerability. It adapts itself marvellously to certain heads which would be deformed by a wig, and is the severe beauty represented in sculpture by the classic head of Æschylus."

2. *The Alopecia of Convalescence.*—A great number of serious diseases are followed by baldness. After typhoid fever the hairs almost always fall in profusion; as also after eruptive fevers, erysipelas, bad phlegmons, typhus, and pneumonia. This may occur also even in a completely physiological condition, many women losing their hair after delivery, although the labour may have been quite normal. This peculiarity it is of importance to mention, and it must nowise be attributed to syphilis or any other affection. The characteristics of the alopecia of convalescence are—(1) the rapidity of its occurrence, supervening in a few weeks; (2) its generalisation and absence of systematisation—it choosing no particular region, but occurring at the right, or left, or everywhere; (3) its general moderation, as even in severe cases it never produces complete baldness; and (4) it is only temporary and reparable. When the hair falls during convalescence it shoots up again. The occurrence of this form is explained by the disturbance of nutrition produced by the disease, and by the conditions which have given rise to this. It is an analogous phenomenon to that observed in the nails, in which a transverse depression or thinning of the nail takes place from defective nutrition during disease. So with the hair, imperfectly nourished at its base, the pilous bulb, it becomes less adherent, not falling during the course of the disease, but after it.

3. *Cachectic Alopecia.*—This supervenes in all diseases which create a deep-seated and chronic disturbance of the economy—in pulmonary phthisis and the other forms of tuburcular affections, in cancer, in organic affections, cirrhosis, impaludism, diabetes, and in the dartrous and syphilitic cachexiæ. It is a general disseminated alopecia, attacking all the hairy scalp at once. All the hairs are dull, dry, pulverulent, having lost their lustre like the hairs of a corpse.

4. *Syphilitic Alopecia.*—Syphilis frequently gives rise to alopecia, and certain prejudices prevail respecting it which the following considerations may dispel. First: at what period of the disease does it appear? When a man forty or forty-five years of age becomes bald it is not uncommonly said that it is due to an old pox, or that he is suffering for the sins of his youth. Nothing can be more false. So far from being a delayed manifestation, baldness is a symptom of recent syphilis, supervening usually three, four, or six months after infection. Usually it follows the first signs of secondary symptoms, towards the third or fourth month, although sometimes, when treatment is postponed, it is delayed until the first or second year. It then supervenes as a symptom of ulcerative syphilides; but cachectic alopecia may occur at any period of syphilis. Occasionally appearing as a consequence of papular syphilide of the scalp, secondary alopecia in the great majority of cases is unconnected with any such lesion. It may appear in any of the forms of the disease, whether benign or malignant; but still it is most usually met with in grave secondary syphilis accompanied by asthenic symptoms, emaciation, and general debility. The fall of the hair takes place without any inflammation, pain, or itching, and occurs indiscriminately at any part of the head, sometimes merely thinning the hair, and at others forming irregular islets of baldness. Generally both forms may be observed on the same head. The extent to which it proceeds varies greatly, from being scarcely perceptible, to the falling off of the hair by handfuls, to the partial, and even in very rare cases to the entire, denudation of the cranium. The hair, too, loses its brilliancy and becomes dry and dull, and thus, with real hair, as Diday observes, the patient has the appearance of wearing a wig. The duration of this form of alopecia is always temporary, so that after from one to six months the fall of the hairs ceases, and they are always and invariably reproduced—so that it may be laid down as a true axiom that persistent and general alopecia is never of a syphilitic origin. Syphilitic alopecia may extend to the hairs of the rest of the body, causing the fall of the eyelashes, the eyebrows, and the hair of the pubes, etc. Alopecia of the eyebrows is even common, especially in women, sometimes merely thinning them, and at others removing them in spots or islets, so that perhaps a third of the eyebrow may be wanting. Nothing is more characteristic than this broken arch, producing at once so repulsive an appearance and so sure a sign of syphilis. The eyelashes are less frequently lost. Genital alopecia is pretty frequent, especially in women, and occasionally the hairs of the armpits and the rest of the body fall. But in all these cases the alopecia is only temporary, and after a certain time disappears. There is no special medication for syphilitic alopecia, all local applications being useless, and cutting the hair or shaving the head does not induce more rapid reproduction of the hair. The mercurial treatment is the exclusive and efficacious remedy, aided, if required, by iron, quinine, etc. Popular prejudice attributes the baldness, which is really the effect of syphilis, to the action of mercury; but under the influence of this a bald head becomes re-covered with hair.

(*To be continued.*)



REMINISCENCES OF THE OLD ROYAL INFIRMARY OF EDINBURGH

BY AN OLD CONTRIBUTOR.

PART II.—EXTENSION AND MORE RECENT CHANGES.

Our former communication was devoted to a description of the original Infirmary, and our recollections of it in our student-days. In the present we proceed to describe the principal changes which have taken place from that to the present time.

For a long time the accommodation of the original Infirmary had become inadequate to the demands for admission, and the managers had been anxiously considering the means of extending the Hospital. The removal of the High School from its old site to the new beautiful classic building on the Calton-hill at last afforded the desired opportunity. Everything looked as if designed for the purpose. The grounds of the Infirmary and the High School were conterminous—the latter building, a substantial one, divided into large class-rooms, entered from common passages or corridors, could be easily converted to the required purpose. It was therefore decided to remove the Surgical Department to the High School, leaving the original Infirmary to the Medical Department. A large addition, however, required to be built to the old High School for private wards, rooms for the resident surgeons and nurses, and for the erection of the operating-theatre, consulting-rooms, etc. The operating-theatre then built (designed by Mr. Bryce) is the finest we have ever seen, whether as regards dimensions or mode of lighting. The area is large, the seats in the body of the theatre and gallery well arranged—in a word, it is perfect as a whole. In the old High School some of the class-rooms had been approached by different staircases. In re-arranging the house as a hospital, all partitions were removed, and the passage converted into a long corridor on each floor, whilst the wall separating the corridor from the wards was left open for some distance from the roof along the whole length of the corridor, so that the air from the corridor and great staircase had free and continuous entrance into the wards. The rooms for the surgeons and nurses, which occupied the opposite side of the corridors, however, prevented light or air entering freely on that side, and thus the arrangements were so far defective. This new Surgical Hospital was certainly an improvement, and gave increased accommodation for patients.

Such was the first extension of the Royal Infirmary buildings; and almost coincident with it other very important changes began in the service of the surgical wards. These changes began when our student-days had ended, and most of them took place after we had left Edinburgh for a time, and only revisited it at intervals, so that our reminiscences of them can scarcely be said to be personal. One of the most important of them as regards the Infirmary arose from the resignation of the venerable Professor of Clinical Surgery, and the appointment of Mr. James Syme to that chair. Mr. Syme had even then vindicated for himself a high position as a surgeon and teacher, and had carried on clinical teaching with great energy and success in his private hospital at Minto House in opposition to the Infirmary. At the time there was very considerable disappointment expressed by a large body of the profession and public at Mr. Liston having been passed over; nor can that be wondered at when we consider his acknowledged eminence as a surgeon, and his long connexion with the Infirmary as a teacher of clinical surgery in conjunction with the former Professor. There seems to have been no small amount of bitter feeling—perhaps none the less that, as the appointment was by the Crown, politics got mixed up with it; but we need not reproduce it here. The appointment led to very important changes in the Surgical Department of the Infirmary. The new Professor was not a man likely to content himself with teaching after the fashion of his predecessor. Indeed, from the position he held towards his colleagues, Liston and Lizars, the Acting Surgeons, he could not have done so. He applied for a service of beds in the Surgical House to enable him to teach on the same method which he had carried on at his private hospital. After some negotiation this was accorded by the managers, both on account of the reasonable nature of the application, and also because Mr. Syme would otherwise have carried on the University course of clinical surgery at Minto House, to the great detriment of the Infirmary. There were now three Acting Surgeons, one of them permanent, as holding his appointment *ex officio*—a position which gave Mr. Syme a decided vantage-ground over the ordinary Acting Surgeons. At first, whilst Liston and Lizars were his colleagues, this was not noticeable; but afterwards, when a younger generation of Surgeons took their place, the effects became very marked. During almost the remainder of his life, Mr. Syme continued to hold his position as Professor of Clinical Surgery, with exception of the very brief period when, after the death of Liston, he accepted the vacant chair of Clinical Surgery in University College, London; but, finding that institution not quite "a happy family," he wisely returned to Edinburgh before anyone had been appointed to his chair. Henceforth his name was associated indissolubly with the Infirmary, and his ability as a surgeon and clinical teacher did much to advance the fame of the Hospital and Medical School of Edinburgh. Shortly after this, Mr. Fergusson, who at an early period of life had attracted attention by his surgical talent and remarkable dexterity as an operator, was appointed

Surgeon to the Infirmary. The brilliancy of his operations and his success in the Hospital, however, led to his being selected by Sir Astley Cooper for the Professorship of Surgery at King's College, London, before his time as Acting Surgeon had expired. The subsequent career of Sir William Fergusson is so well known and so recently closed by death that it would be almost an impertinence to eulogise him here. Suffice it to say, that though, like Liston, he was in one sense lost to the Edinburgh School, like him he did much to extend its fame in the larger sphere to which he was called. The vacancy caused by Mr. Fergusson's translation to King's College was the occasion of another change in the service of the Surgical Hospital. Two gentlemen, Dr. James Duncan and Mr. James Miller, became candidates for the office of Assistant-Surgeon. Both were known to the profession and public as able surgeons; both had been connected with Liston—Dr. Duncan as his Resident Surgeon, first in Edinburgh, and subsequently at University College Hospital, and as his right hand man in the early part of his career in London. Mr. Miller had been Mr. Liston's private assistant in Edinburgh, and had succeeded to much of Liston's practice. The influence and claims of these gentlemen were such that the managers were placed in a difficulty which to appoint, and wisely solved it by appointing both. The surgical staff was now increased to three Acting and two Assistant Surgeons, a staff better proportioned in all respects to the increased and increasing work of the Infirmary. Both the gentlemen then appointed did good work in the Hospital. Dr. Duncan was an able operator, and his clinical instructions were largely followed and highly appreciated by the students. Indeed, we believe that had he given up his large general practice at the time Mr. Syme went to London, he would probably have been appointed to the clinical chair; but, as we have already said, Mr. Syme's return was so rapid that the vacancy had not been filled up. Mr. Miller, on the death of Sir Charles Bell, was appointed to the chair of Surgery in the University, which he adorned as an eloquent lecturer and able teacher and hospital surgeon until his death in 1864. Both Duncan and Miller were lost to the profession at a comparatively early period, whilst apparently in the prime of life and with the prospect of many years of usefulness before them. Another young Surgeon of the Infirmary, of great promise, Dr. Richard James Mackenzie, fell a victim to his professional enthusiasm. He accompanied the British Army to the Crimea, and died of cholera, the result of fatigue and exhaustion, a few days after the battle of the Alma. As we close this list of those of our old friends, some of them old fellow-students and companions, who have fallen by the way, the memories of the old times come back with sad yet pleasant recollections. Of others who did good work in the Royal Infirmary, and some still connected with it, we will not speak. Happily they are still amongst us, and we must not praise them to their face.

Another extension of the Surgical House comes now to be spoken of. Supply seemed to create demand for more accommodation in that department, and accordingly, in 1852, what was lately known as the New Surgical Hospital was added to the Old High School. The position of the existing buildings in some degree limited the architect as to the exterior form of the new Hospital, and also as regarded space; but the internal arrangements seem to have been designed by more than one person, and later, when their defects became too evident, they were disowned alike by the architect and the medical authority who got the credit of them. The general front of the New Surgical Hospital was parallel to Drummond-street, facing the south, thus being placed at a right angle to the Old High School, to which it was joined by a prolongation of the corridor. The corridor system then in fashion was adopted. The air of the corridor, heated to about 60° Fahr., was to supply the wards in cold weather, whilst the foul air was to be extracted by an exhausting shaft. In warm weather the ventilation was to be by doors, windows, and fireplaces. Some professional authority seems to have insisted on the advantages of smaller wards; and that nothing might be wanting for the convenience of patients, or the insalubrity of these small wards, they were furnished with water-closets and lavatories. These small wards were lofty, and contained large cubic space of air, but were dark, dull, and the air was not easily changed. The larger end wards presented a strong contrast; they were well lighted and cheerful. The scientific mechanical ventilation proved an utter failure. In the course of four years after these new wards had been opened, an outbreak of hospital gangrene led to the arrangements being changed. The two centre small wards in each department were converted into one large ward, the obnoxious water-closets and lavatories removed, and all connexions with the drains cut off and built up. The whole length of the wall between the corridor and the wards was cut away some feet from the roof to admit the air from the corridor in a more equal manner, whilst the patients were, on that side of the ward, protected by a boarding so placed as to prevent the air coming directly upon them. Fireplaces in the corridors served to modify the temperature of the air; natural ventilation by windows, doors, and fireplaces, and air-chambers from without, opening under the table in the centre of the wards, was resorted to, and henceforth there was no more hospital gangrene. These changes were at first only made in the upper range of wards, on the urgent representation of Mr. Spence, the senior Surgeon, in whose department the hospital gangrene had chiefly occurred. Subsequently the same changes were carried out in the wards on the lower floor. Afterwards, so far as regarded the wards, there was little to complain of. There was, however, great need of more accommodation for patients, and better rooms for the residents and nurses, baths, and other requirements.

At a comparatively recent period the Surgical Department was still further increased by the erection of the New Lock Hospital, built at very considerable expense. This addition consisted of two large public wards, smaller private wards, a small theatre for examining patients and for performing operations, bath-rooms, work-rooms for convalescents, etc.; in short, a very perfect Lock Hospital. On the representation of the Surgeons, one of the large wards was set aside for male patients—a most beneficial arrangement, as it removed a very objectionable class of diseases from the general surgical wards, and also afforded the students larger opportunities for seeing the treatment of venereal diseases. Unfortunately that arrangement was only of short duration, for when the new nursing system was introduced, the former Fever House was converted into a Nurses' House, and the New Lock used as the Fever Hospital.

As the extension by addition of new buildings was in the Surgical Department, we have insensibly been led to write hitherto almost exclusively of the surgical service. It must not be supposed, however, that the Medical Department of the Hospital remained without changes; on the contrary, the removal of the surgical cases to the New Surgical House left several large wards to be used for medical cases, and very shortly afterwards the old operation-theatre was converted into wards for the more infectious diseases.

Subsequently, old Surgeons' Hall was acquired and used as a Fever House. The medical staff was also increased in number, and Obstetric Physicians were appointed both in the University and ordinary medical wards. The clinical lectures and clinical teaching in the wards, so long a speciality in the Edinburgh Infirmary, was still further developed, and new features introduced into the clinical teaching, particularly in regard to physical diagnosis. Amongst the teachers, we need only mention the names of those who have passed from amongst us to show the nature of the work. Alison, "the beloved physician"; Craigie, the learned writer, whose heroic treatment would strike terror into expectants and eclectics of recent days; Bennett, the earnest clinical teacher; Laycock and Warburton Begbie—names so well known in connexion with medical science—are alone sufficient to show the amount of varied talent and experience engaged in the work of the Royal Infirmary; and, besides these, there were many who are still amongst us, whose skill and talents were ungrudgingly given to the Medical Department of the Old Infirmary. And the work goes on and flourishes, for never, whether as regards the teachers or the taught, has better or more earnest work been done than is doing at the present time.

The mention of the present reminds us that the Old Infirmary is closed and our task finished. Had our readers been passing the old house one cold, dark evening in the end of last October, they would have been startled by

> "A wild, mysterious strain
> Of weirdest harmony"

proceeding from within its deserted walls. That strain was sung by the medical and surgical residents as they encircled for the last time the table in the great operating-theatre.

Their parting song was "Auld lang syne," sung, we presume, in more solemn cadence than it is usually sung at the close of convivial meetings, and with variations—the latter principally by the feline tribes infesting the neighbouring passages, who would also doubtless be preparing for an exodus. The scene must have been a weird one. In that gaunt, dimly-lighted amphitheatre we could almost fancy the spirits of the medicos of former days taking part in the closing chorus. So the curtain fell!

In finishing our Reminiscences, we crave a few words, partly apologetic, partly to claim some merit to ourselves—the latter especially, because, unless we take it, nobody else is likely to give us any.

We confess, then, that this latter part of our Reminiscences has proved much more difficult than the former, just because the period treated of was more recent, the majority of the actors still around us, and some unintentional expression misinterpreted might have given offence. It is in regard to this that we claim merit—we have been sorely tempted. That excellent and "superior person," St. Anthony, could hardly have been more tried by evil imps and their suggestions than we have been. These "Wills-o'-the-wisp" have flashed their meteor lights into out-of-the-way nooks amongst the convolutions of our brain, rousing therefrom mirthful memories, anecdotes, and squabbles of bypast days, and have tried hard to induce us to brighten the dry details by something piquant. But our good angel kept us "straight," showing us that what made us chuckle in recollection might look ill-natured if put in print, and that by following the pleasant thermal rills by which these sprites allured us we might possibly find ourselves unexpectedly immersed in hot water. Even yet these imps molest us, and one, assuming the *rôle* of critic, suggests that unless we introduce something lively—*i.e.*, mischievous—he begs to characterise our style as the "inoffensive historical"; but we are not ignorant of their devices, so bid him and all his fellows *avaunt!*

Again, we feel that it may be thought we have not been sufficiently eulogistic of some eminent names connected with the more recent days of the Old Infirmary. Well, the quickly passing years had gradually brought us nearer "the mountains," the purple light which had lent such a mysterious grandeur in the distance had faded from off them on a nearer view, and though we could still appreciate their grandeur, we could perceive native ruggedness and defects which marred the ideal of our youth. Then there was change in ourselves: our enthusiasm had been gradually parting with its caloric during our life-journey; and so, whilst we could still admire, we could not fall down and worship as of yore.

These Reminiscences have been to us a labour of love. Insensibly they have carried us back into the past, to our early student-days, with all the enthusiasm, the day-dreams, and aspirations of youth—no matter what became of these. Back into the battle of real life, with its mingled experiences, anxieties, joys, and sorrows, and kindly memories of those who mingled with us in the fight. And so, in the quiet closing twilight, when all asperities were forgotten, and only the pleasant memories remained, it was

> "Sweet from out the loopholes of retreat
> To gaze on such a world."

HYDROCELE WITH CHOLESTERIN.—In a clinical lecture at La Charité, Prof. Gosselin drew attention to a man, aged forty-five years, the subject of a hydrocele, which had become painful in consequence of a slight injury received a few days ago. At first he was inclined to believe it a hæmatocele, owing to the difficulty he had in observing its transparency. This was at last accomplished by causing the patient to stand in front of a window through which the sun was shining. This difficulty might be due in part to a thickening of the coverings which was present, and to some swelling of the testis—a condition which Prof. Gosselin has found, without knowing why, to prevent seeing the transparency of effusion contained in the tunica vaginalis. About one hundred grammes of liquid were drawn off, and an injection of tincture of iodine (which Prof. Gosselin always dilutes with equal parts of water in subjects of forty or fifty years of age) thrown in. The colour of the liquid was much darker than usual, which explains the difficulty of the diagnosis; and even to the naked eye it was plain that the colour of the liquid was due to scales of cholesterine, with which it was loaded.—*Gaz. des Hop.*, January 22.

REVIEWS.

Studies on Fermentation: The Diseases of Beer, their Causes, and the Means of Preventing them. By L. PASTEUR, Member of the Institute of France, the Royal Society of London, etc. A translation of "Études sur la Bière," with notes and original illustrations by Frank Faulkner, and D. Constable Robb, B.A., late Scholar of Worcester College, Oxford. London: Macmillan and Co. 1879. Pp. 418; and many plates.

IT is, we think, no longer questioned that the antiseptic method of treating wounds, and especially that thoroughgoing form of it known as "Lister's" method, is attended with benefit to the patient, both by producing better results in ordinary cases, and by enabling those serious operations which involve the opening of cavities, and which before were rarely attempted, to be performed with comparative safety. But the *rationale* of this method of treatment is still very far from being settled. Do those fermentative and putrefactive changes which so often take place in wounds arise from the state of the patient himself, or are they due to some influence exerted by the atmosphere; and, if this be the correct view, what is the nature of that influence? These questions seem to be but little nearer solution than when they were first raised.

Under these circumstances, nothing could be more opportune than the appearance of this elegant translation of M. Pasteur's "Études sur la Bière." The work, undertaken in the interest of the French brewing industry, is replete with facts of the greatest importance to medical science, being the results of experiments bearing directly upon the questions above mentioned, such as the growth of microscopic plants, and the parts they play in the processes of fermentation and putrefaction. The author says, in his preface: "These new studies are based on the same principles which guided me in my researches on wine, vinegar, and the silkworm disease—principles the application of which is practically unlimited. The etiology of contagious diseases may perhaps receive from them an unexpected light."

M. Pasteur deals in the first chapter with the *rationale* of the process of brewing, showing "the intimate relation existing between the deterioration of beer and the process of brewing." In Chapter II. he deals with the causes of the diseases which affect beer and wort, and under this heading shows, firstly, that every unhealthy change in the quality of beer coincides with the development of germs which are alien to the pure ferment of beer; and secondly, that the absence of change in beer coincides with the absence of foreign organisms. In the third chapter he deals with the origin of the different kinds of ferments, and describes in full his experiments on blood, urine, wort, and grape-juice, etc. In the fourth chapter his experiments with different fungi are given, showing that each kind of fermentation is due to the growth of a different fungus or ferment, and that no one ferment can, under any circumstances, be converted into another, or give rise to any but its own fermentation. In the fifth chapter the alcoholic ferments are treated of, the different varieties of yeast, especially the important distinction between high yeast and low yeast. Chapter VI. is on the physiological theory of fermentation, including the influence of oxygen on fermentation; and in the last chapter the author describes a new process for the manufacture of beer, the result of which will be the production of a beer "of excellent keeping qualities, we might even say a beer incapable of undergoing change."

From this programme we must select for notice some of those points which are specially of medical interest. Turning to the first chapter, we meet with the question, "Why is yeast added to wort?" Not to make it ferment, but to insure that the fermentation which arises shall be of a "healthy" alcoholic character, and sufficiently powerful to smother the "diseased," or lactic, butyric, and acetic fermentations, which are sure to arise with the alcoholic. Therein wort differs from must, or grape-juice, which is protected from "diseased" fermentations by the bitartrate of potash contained in it. Now comes the important question, "Whence are these ferments?" By a series of elaborate and carefully detailed experiments (given at page 25) it is conclusively shown that fermentation cannot arise spontaneously in wort, therefore it must be the result of some influence exerted by the atmosphere; and this influence is proved to be minute spores of fungi which float

in the air. The importance and interest attaching to this fact, from a medical point of view, are quite obvious. The author repeated his experiments with blood and urine, with the same result. At page 45 we find the following:—"As early as 1864 the *Gazette Hebdomadaire de Médecine et de Chirurgie* published an account of urine made ammoniacal in the bladder, the author of which, Dr. Traube, makes the following observations:—'It was believed that in consequence of the retention of the liquid [urine], and the resulting distension of the bladder, that organ became irritated, and produced a larger quantity of mucus, and that this mucus was the ferment which caused the decomposition of the urea by a chemical action peculiar to itself. This belief can no longer be held in presence of M. Pasteur's discoveries. This observer has demonstrated in the most conclusive manner that ammoniacal fermentation, like alcoholic and acetic, is produced by living beings, whose pre-existence in the fermentable liquid is a necessary condition of the process.'" This part of the subject is illustrated by a plate showing the microscopic appearance of seven different kinds of disease-ferments, namely, those which occur in "turned beer," "putrid beer," "ropy beer," etc.

A very large amount of space is devoted to descriptions of experiments proving that the "living beings" alluded to above are the essential cause of fermentation, the *rationale* being that fermentation never takes place in any liquid when the "living beings" are excluded. The details are too long to be given here, and, it must be confessed, are very wearying to read; but it will be readily understood how very important it is to take every precaution against fallacy in experiments of this kind. To errors of experiment and vitiated results M. Pasteur attributes the different results arrived at by other observers, and the rise and growth of the doctrine of spontaneous generation. The next fact insisted on by the author follows almost as a corollary of this, namely, that each kind of fermentation—alcoholic, lactic, butyric, etc.—is caused by a separate and distinct plant, and one kind of ferment cannot, under any circumstances, produce another.

The distinction between "high" and "low" yeast is worthy of attention. When beer is fermented at a high temperature, 66° to 68° F., the yeast formed is very abundant in quantity, very viscous, and, rising to the surface, flows out at the bung-holes of the casks. During the process of fermentation, which lasts three or four days, and is very active, it increases some five to seven fold. This is "high" fermentation. "Low" fermentation, on the other hand, is a slow process, effected at a low temperature, 47° to 43° F., at which point it is maintained by floats containing ice. The process lasts ten to fifteen days, the yeast is produced less abundantly, and it sinks to the bottom of the cask.

The two kinds of yeast thus formed show remarkable differences in their properties (page 188): "In comparing 'high' yeast with other alcoholic ferments at the same stage of development, three points are specially striking. The diameter of its cells is relatively large, their general aspect is rounder, and when they are undergoing propagation their mode of budding produces a remarkably ramified appearance, so that the cells always occur in clusters and branches." "Low" yeast (page 193) consists of cells mixed with an amorphous granular matter. Its development is very slow, and the budding and branching cells are never seen. It is an undecided question whether "high" and "low" yeast are distinct plants, or merely modifications of the same. The author is inclined to think that they are quite distinct, as he has always failed to produce "high" fermentation with low yeast, however high may be the temperature employed.

We need take but one more point for consideration from this interesting volume, and that is the effect of oxygen or air upon these minute fungi. First, what is the effect of total deprivation of air? The following experiment is worth quoting in answer to this question (page 59): "Gay-Lussac crushed some grapes under a bell-jar filled with mercury, after having washed them in hydrogen to expel the air adhering to the grapes and to the sides of the jar. Having waited for several weeks without detecting any signs of fermentation he introduced some bubbles of oxygen, and fermentation, showed itself on the following day." This experiment, though wrongly interpreted by Gay-Lussac, is most instructive. The cause of the fermentation here was the minute fungi which adhered to the grape-skins and became mixed with the juice when the grapes were crushed. But as long as they were deprived of air, they remained inactive.

Now, what is the effect of abundant air-supply? That the ferment grows luxuriantly, and absorbs an enormous quantity of oxygen (page 256). But under these circumstances its fermentative action upon the medium in which it grows is greatly diminished; in fact its power as a ferment is impaired. But if it receives only sufficient air to rouse its dormant vitality it is able to continue its supply of oxygen by decomposing the medium in which it grows (page 253). As the author briefly expresses it, "When its respiratory power becomes null, its fermentative power is at its greatest." Thus we see that a limited supply of air is necessary to commence fermentation, but a large supply is prejudicial to the continuance of it. It will be observed that the experiments from which the author draws his conclusions were all made with yeast upon sugar. But it is legitimate to suppose that other ferments which act in a similar way in other media should have similar properties, and thus a most important light is thrown upon the surgical controversy of antiseptic dressings *versus* no dressings at all. In the one case the antiseptic destroys the germs or ferments; in the other the free supply of air renders them innocuous, or at least greatly diminishes their power. Under the old *régime* of plain water-dressings, the ferments were not destroyed, but free access of air was prevented, so that some fermentative action was generally started in the wound, with more or less serious results.

We would advise all who wish to obtain clear ideas on fermentation and kindred subjects to read this work. It is well written and well translated, and the plates and diagrams have been prepared with the utmost care. The thanks not only of brewers, but also of the medical profession, are due to Messrs. Faulkner and Robb and to Mr. Wait for the task they have so successfully accomplished.

PROVINCIAL CORRESPONDENCE.

MANCHESTER.

January 27.

The Children's Hospital at Pendlebury and Dr. Humphreys.

The House-Committee of the Pendlebury Hospital has recently seen fit to suspend the Senior Physician from his duties at a moment's notice, on grounds so comparatively trivial as to have aroused the profound indignation of the profession. Before entering into the details of the case it will be desirable to give a few particulars as to Dr. Humphreys' connexion with the Hospital.

Three years ago, in December, 1876, an advertisement appeared in the medical journals inviting applications for the appointment of Assistant-Physician to the Pendlebury Hospital, and stating that a salary of £300 per annum was attached to the post. A great number of candidates applied, amongst whom were not a few of marked distinction. The gentleman eventually selected was Dr. Henry Humphreys, who, besides having achieved great success at the University of Cambridge, where he had won the fourth place amongst the wranglers of his year, and had obtained a Fellowship of St. John's College, had already come to be regarded by all who knew him as a young physician of great scientific promise. After he had held the post of Assistant-Physician for twelve months, Dr. Borchardt, the directing Physician, having retired, Dr. Humphreys was appointed Physician to the Hospital at a salary of £400. A second Physician, who was also paid a salary, was subsequently appointed in the person of Dr. Henry Ashby. It was understood that these salaries were offered in order to induce the very best men to come forward as candidates, and also as some compensation for their being debarred from general practice, and being required to devote a large amount of time to the work of the Hospital. In the meantime things did not go on very smoothly in the administrative department, and, about a year ago, Dr. Ashby, being considered specially fitted for the work, was made responsible for the medical administration, the professional status of the two physicians remaining, as before, perfectly equal. In this arrangement Dr. Humphreys acquiesced. Before many

months had elapsed, however, Dr. Humphreys appears to have had misgivings as to his position with the Board of Management, and to have entertained some thoughts of resigning. At this juncture he sought a private interview with the chairman, who assured him that he retained the full confidence of the managers. He accordingly went quietly on with his work, and concluded that his impressions must have been unfounded. All who have worked side by side with Dr. Humphreys, or as his subordinates, agree in bearing testimony to the painstaking zeal and untiring diligence with which he fulfilled his duties. The story of his suspension has been told by himself in a letter, of which the accuracy remains unchallenged.

A ward-sister of the Hospital had occasion to reprimand one of her nurses, and incurred thereby the displeasure of the Lady Superintendent. The episode ended in the resignation of the sister. She was, it appears, a valued official, and when Dr. Humphreys missed her from her accustomed place he made inquiries, and eventually promised to see the Lady Superintendent on her behalf. An interview took place, which was not concluded without some display of angry feeling. Dr. Humphreys took occasion afterwards to communicate the substance of what had passed to the sister whom he was endeavouring to befriend, upon hearing of which the Lady Superintendent stated the whole case to the House Committee. The Committee met, found on inquiry that the account given by the Lady Superintendent was admitted to be substantially correct, pronounced Dr. Humphreys to have been guilty of an act subversive of discipline, and then and there suspended him from his duties until the next meeting of the General Board. Dr. Humphreys resented this summary treatment by sending in his resignation, accompanied with a request for a full statement of the grounds of his suspension. He received an answer to the effect that any necessity for further correspondence was obviated by the fact of his resignation having been offered and accepted.

The consequence of this action of the Board is that Dr. Humphreys is suddenly deprived of his income, and checked in a career of professional activity and usefulness, with his prospects, if not blighted, at any rate seriously impaired. It is felt by the profession in Manchester that so extreme a measure in the case of a hospital physician could not be justified by any mere breach of discipline, and would indeed only be warranted in the event of some grave moral delinquency. If the managers had other reasons for desiring Dr. Humphreys' connexion with the Hospital to cease, they should have had the manliness to say so. To suspend him simply on the ground of the occurrences here stated has the appearance of being an intolerable abuse of authority. The sympathy of the profession with Dr. Humphreys has found expression in the following memorial, which has been signed by almost every one of the acting physicians and surgeons of the hospitals of Manchester and Salford:—

"To Henry Humphreys, Esq., M.D., M.R.C.P.—We, the undersigned physicians and surgeons to the hospitals in Manchester, wish to express our sympathy with you in the position in which you have been placed by the action of the Committee of the Children's Hospital, Pendlebury. Since you came to Manchester, three years ago, you have shown, by your contributions to the medical and microscopical societies, and in other ways, that you possess marked ability, and that you follow your profession most zealously. We deeply regret that your work, which promised to add much to medical knowledge, should have been cut short for the present in the manner it has been. Since the Committee of the Pendlebury Hospital refuse to give other grounds for their action than those which appear in your letter in the *Lancet* of December 20, we can only presume that they have acted solely on these grounds. Should such be the case, we feel that their conduct has been extremely arbitrary and unwarranted, and that they have been wanting in that courtesy which was to be expected from the committee of a hospital towards a physician of your standing. If, on the other hand, the Committee have been led to the course they have adopted by reasons other than those which they have set forth, but which they decline to communicate to you, we cannot but characterise such conduct as unjust to you and unworthy of those gentlemen to whom the supervision of the Hospital has been entrusted. We feel that the Committee have by their action done you a most grievous wrong, and we are satisfied that in doing so they have acted in a manner detrimental to the interests of the Hospital of which they have the management." This is signed by the following gentlemen:—William Roberts, M.D., F.R.S.; F. A. Heath, M.R.C.S.; H. Simpson, M.D.; E. Lund, F.R.C.S.; J. E. Morgan, M.D., F.R.C.P.; S. M. Bradley, F.R.C.S.; D. J. Leech, M.D., M.R.C.P.; W. Whitehead, F.R.C.S. Edin.; J. Thorburn, M.D.; D. Little, M.D.; J. Dreschfeld, M.D., M.R.C.P.; J. Hardie, M.D.; J. Ross, M.D., M.R.C.P.; D. Lloyd Roberts, M.D., F.R.C.P.; R. Heslop, L.R.C.S.; C. J. Cullingworth, M.R.C.P.; J. H. Ewart, M.R.C.S.; E. Gumpert, M.D.; W. N. Maccall, M.D.; H. W. Boddy, M.B.; S. Buckley, F.R.C.S.; A. W. Stocks, M.R.C.S.; A. M. Edge, M.D., M.R.C.P.; A. Boutflower, M.R.C.S.; J. H. Morris, M.R.C.S.; W. J. Sinclair, M.D.; R. D. Fox, F.R.C.S. Edin.; J. Scott, M.B.; C. E. Glascott, M.D.; S. H. Mules, M.D.; A. E. Jones, M.D.; F. M. Pierce, M.D.; T. H. Pinder, M.R.C.S.

It is understood that the funds of the Hospital not being in the most satisfactory condition, the vacancy caused by Dr. Humphreys' resignation will not be filled up for the present, D. Borchardt having in the meantime undertaken to resume his duties at the Hospital for the next twelve months as Honorary Directing Physician.

GENERAL CORRESPONDENCE.

DISTINCTION BETWEEN TYPHUS AND TYPHOID FEVERS.

LETTER FROM DR. ROBT. PERRY.

[To the Editor of the Medical Times and Gazette.]

SIR,—I had no intention of any longer continuing the correspondence respecting the disputed priority of the discovery of the distinction between typhus and typhoid fevers, as I am satisfied that the members of our profession who are conversant with the facts of the case are now able to estimate the repeated self-assertions of Dr. A. P. Stewart at their proper value. I cannot, however, permit the statements of his letter in the *Medical Times and Gazette* of the 17th inst. to pass without contradiction, lest my silence might be misconstrued.

Dr. Stewart insinuates that the late Dr. Perry had no fixed opinions of his own upon the subject, and that he had changed all his opinions subsequently to the publication of his observations in 1836.

No one who ever read what Dr. Perry wrote upon the subject could ever infer what Dr. Stewart insinuates; and the only one point upon which I admitted that Dr. Perry changed his views was as to the concurrence of the intestinal lesions which are characteristic of typhoid fever as a *complication* in a proportion of the typhus cases. I am, &c.,

Glasgow, January 26. ROBERT PERRY.

HOT WATER FOR THE INDUCTION OF PREMATURE LABOUR.—Dr. Benicker related at the Berlin Obstetrical Society a case of dropsy of the amnios, showing the advantage of inducing premature labour by irrigating the vagina with water at a temperature of 40° R. (122° Fahr.), to which some carbolic acid had been added. Two injections in the evening brought on pains, which increased during the night, and after two other injections in the morning the cervix became well dilated. Dr. Benicker recommends this procedure as an energetic means of exciting labour without injury to mother or child. Its effects will vary according to the degree of excitability of the uterine fibres in different women. Dr. Möricke related a case in which he had in vain attempted to induce premature labour by injecting first pilocarpin, and afterwards hot water, which was employed five times. He eventually succeeded by means of a bougie. Dr. Runge, who had already published a successful case, cited another in which the injection failed. All trials that have been made show the harmlessness of the procedure for the child. Dr. Veit referred to a case in which excessive rigidity of the soft parts was overcome by the injections. Dr. Wegscheider stated that many years since hot-water injections were employed in Berlin, but were given up on account of the bad effects they were supposed to have on the child.—*Berlin Klin. Woch.*, December 29.

REPORTS OF SOCIETIES.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

FRIDAY, JANUARY 16.

JOHN SYER BRISTOWE, M.D., F.R.C.P., President, in the Chair.

THE minutes of the last meeting having been read and confirmed, a letter from the Local Government Board was read, stating that the Board will shortly address to the Society a further communication in reply to the inquiry *re* "paupers."

A letter was read from Dr. Whitmore, explaining that the vestry of the parish of Hampstead desire to give to Mr. Lord, the late Medical Officer of Health, the largest retiring allowance possible, and, in addition, to add ten years' full payment as a testimonial. They have, however, been advised by their solicitor that they have no power to make such a grant. He desired to have the opinion of the Society as to the legality of this decision. The matter was referred to the Council for consideration and report.

Mr. MURPHY made some remarks upon the proposal of Dr. Cameron to introduce a Bill in the coming session of Parliament to provide facilities for animal vaccination.

On the motion of Dr. TRIPE, the Bill was referred to the Council for consideration and report.

Dr. TRIPE, as treasurer, desired to know what alterations, if any, were proposed to be made in the by-laws—more particularly those having reference to the finances of the Society. He proposed that Associates should be required to contribute to the support of the Society, and have power to vote at the ordinary meetings. He further hoped that some official notice would be taken of the enforced resignation of Dr. Farr.

Dr. J. F. J. Sykes, of London, and Mr. J. A. D. Mackey, of Brighton, were elected Associates.

REFORM IN THE STATISTICS OF ANNUAL RETURNS.

Mr. MURPHY then read for Dr. John Tatham (of Salford) a paper on the above subject. He said: The requirements of health officers in the service of the various town councils and other large urban authorities of Great Britain differ materially in some respects from those of the officers acting under the London vestries, and, consequently, the forms issued by the metropolitan Society have been but sparingly adopted in the provinces. It is surely worth while to inquire whether the forms of this Society cannot be so modified as to answer the purpose equally of the metropolitan and the extra-metropolitan officers of health, and so lead to their being more generally adopted. The unsatisfactory condition of our national vital statistics is largely due to the fact that, with respect at least to the large urban districts, the health officers of these authorities are working solely with regard to local requirements, and entirely without reference to a national statistical system. These annual reports are, with comparatively few exceptions, well-nigh worthless, solely from want of uniformity in the tabular forms employed. He wished it to be understood that he suggested the tables as a *minimum only* of statistical information, to the use of which, with whatever modifications may be deemed expedient, all might agree. Thus a uniform mass of statistical information respecting the various districts of the kingdom would be available for the use equally of the statistician and of the statesman. The element of uniformity would itself vastly increase even the local value of such information. The following is a short summary of the information given in the tables, and will explain the nature of the particulars to which each table has reference:—Table A is similar in most respects to Table 1 of the metropolitan Society's collection, except that it gives the density and the birth and death rates, of which the two latter are included in the Society's Table 2. Table B gives an analysis of the mortality for a series of years. It shows the deaths of children at the ages under one year, under five years, and those of persons over sixty years, and also the death-rates at those ages, and from seven zymotic diseases; the infantile mortality being measured by the number of children dying under twelve months old per 1000 births. Table C gives the births registered in a town and in its various registration sub-districts, wards, or other statistical sub-divisions—distinguishing the legitimate and illegitimate births. This table when filled up generally shows forcibly how different is the rate of mortality of illegitimate children as compared with that of children born in wedlock. Table D gives the estimated population, the births and birth-rate, the deaths and rate of mortality per 1000 living in the various statistical sub-divisions of a town. The death-rates are also given for these areas from the five principal classes of disease; the deaths occurring in public institutions having been distributed. Table E gives the population and the annual rate of mortality occurring in a town at five groups of ages, compared with the English life-table rate at those ages, for persons, for males, and for females. A glance at this table will show how essential it is to ascertain not only the number of persons living at the various age-groups, but also the life-table rates at those ages, in order that we may know how much the death-rate at any given age-group of a given locality may be in excess or in defect of the life-table rate at that age. The grouping of ages here adopted has been used by the Registrar-General in his Weekly Returns, under the advice of Dr. Farr, for more than forty years. And if it be admitted that for local reports relating to populations not exceeding two or three hundred thousands at all ages, five groups of ages is sufficient sub-division, it seems impossible to adopt a more convenient grouping. Table F.—The main object of this table is to show all the principal causes of death in combination with ages, at the five selected groups, so arranged as to appear conveniently in a report on one page of ordinary dimensions; and thus to avoid the unwieldy folded tables commonly in vogue, and which are so troublesome to refer to and to use. If it is judged desirable to show the causes of death of males and females separately, three of these page tables should be given, one each for males, females, and persons. Except, however, in special investigations this appears to be unnecessary. Table G gives the deaths from several specified causes without distinction of age, occurring in the various wards or other sub-divisions of the borough; and also the deaths occurring in the various public institutions. Table H gives the annual rate of mortality during the twelve months, from the five classes of disease at five groups of ages, per 1000 persons estimated to be living at those ages. When filled up this table shows how misleading is a statement of the general death-rate due to any important class of diseases, when taken as an expression of their fatality at certain ages. Table I gives the number of deaths and the proportion of deaths certified by medical practitioners, by the coroner, and the number and proportion of uncertified deaths. This table should never be omitted from a health report. Table J gives the prices paid by the Poor-law authority for the principal articles of food and of fuel. These prices may be taken as approximately representing the minimum average prices paid by the public for similar commodities. The average weekly number is also given of paupers relieved by the guardians.

In the debate following the reading of the paper,

Dr. TRIPE said that it was erroneous to calculate out the death-rate for any of the metropolitan districts, in order to ascertain the relative rate of mortality in each, without eliminating certain sources of fallacy—for example, the relative number of servants. Wherever servants constitute the bulk of the population, there the death-rate is low. It is no gauge of the health of a district that the death-rate should be so many per 1000 below that of other districts. When a large proportion of the population is about middle-age there must be a low death-rate. He did not see how they could alter the method of calculating the vital statistics of districts, as they had already made considerable changes upon the recommendations of this Society, and it would invalidate their returns if they were to make more radical changes. Again, all who receive their salaries from the Local Government Board must adopt existing tables. Salford is one of those towns particularly favourable for the acquisition of statistical information.

Mr. LONGSTAFF alluded to the trouble of getting out vital statistics, because a uniform system of registration is not kept up by the medical officer of health. He had found that there was a need of greater simplicity in the vital statistics. In addition, it would be well if the officer of health would give some of the topographical details. We ought to know something of the rough geology of the town and the height above the sea; also, whether the soil is

pervious or waterlogged, the average fall of the sewers, the proportion of privies and water-closets; also whether the pail system is used.

Mr. Humphries remarked upon the value of crude death-rates. Small groups of ages are necessary in order properly to estimate the death-rate. Thirteen columns, as recommended by the Society, are not sufficient. It is important to show distinctly the mortality of males and females separately, especially in large towns. From the certificates furnished by the Registrar-General it is possible to calculate out the proportion of legitimate and illegitimate births.

Dr. Bristowe alluded to the paper he had read before the Society showing the influence of the birth-rate on the death-rate. According as the birth-rate is high or low the death-rate varies considerably. For example, in Dulwich, the wealthy part of his district, the birth-rate is low, and many servants are employed, who do not contribute much to either the birth-rate or the death-rate. In Camberwell the birth-rate is high, there are few servants employed, and the death-rate is correspondingly high.

It was ultimately proposed by Dr. Tripe, and seconded by Mr. Murphy, that it be referred to the Council to select seven gentlemen to form a committee to consider the proposal of altering their system of registration.

THE PATHOLOGICAL SOCIETY.

Tuesday, January 20.

Jonathan Hutchinson, F.R.C.S., President, in the Chair.

Retarded Hereditary Syphilis.

Dr. S. Coupland exhibited specimens from two cases in which the manifestations of hereditary syphilis were "late" or "retarded." The first case was that of a girl who was admitted into Middlesex Hospital at the age of thirteen, after suffering from renal dropsy for ten months. The liver was felt as a firm, irregular mass, and hereditary syphilitic mischief was inferred from the fact that patient was the seventh child in a family of twelve, of which number three were still-born, and four died in infancy, most of the latter having shown distinct signs of congenital syphilis. The first, second, and sixth children were healthy, while the eleventh was weakly. Moreover the patient herself had notched incisors and corneal opacity. She died three months after admission, from the renal disease. The deformity of the liver was found to be due to the existence of two large, firm, caseating gummata situated in the right lobe. The spleen was also indurated, but not lardaceous; it weighed nine ounces and a half. Parenchymatous nephritis was well marked. The second case was that of a badly-developed girl, who died at the age of eighteen years and a half. She was one of a family of thirteen, seven of whom had died in infancy; the mother had also had two abortions. The patient herself was said to have been quite free from all the ordinary signs of infantile syphilis, and to have continued healthy up to three years before her death, when she began to have painful swellings near the knee-joints. Nodes developed also on the front of the tibiæ and on the forearms, and fourteen months before her death there began necrosis of the frontal bones. Death was due to nephritis and cellulitis of the right leg, the latter being the result of the suppuration of a node and the necrosis of the tibia. Post-mortem, there were found on the right tibia many isolated, badly defined, periosteal, gummatous growths, but without any great osteitis except at the site of a suppurating gumma, where there was superficial necrosis. There was also necrosis of the frontal bone, and two gummata were seen on the frontal and left parietal bones, one of these growths involving both tables. There was perihepatitis, and the liver itself was very fatty, and contained one small caseous gumma. The spleen was firm, but not lardaceous. It weighed thirteen ounces, and had a glistening surface. The kidneys, as in the other case, presented well-marked parenchymatous nephritis. The left upper central incisor had the characteristic notching. Dr. Coupland thought that the family history and the teeth of the patients themselves, together with their personal history, furnished sufficient evidence for the conclusion that these two cases were instances of "late" or "retarded" congenital syphilis. The disease could not have been acquired, and the history of the patients went to show that they had not suffered appreciably from syphilis in infantile life. Lancereaux had first drawn attention to this class of cases, about whom it was always difficult to be absolutely certain; but observations regarding congenital syphilis in recent years made it impossible to doubt that such cases do occur. The speaker mentioned that two similar cases had been recorded by Laschkewisch, of Charkow, in 1874. He also remarked upon the great frequency of renal disease, apart altogether from lardaceous changes, as the cause of death in the subjects of constitutional syphilis.

The President had some doubt regarding the applicability of the term "late" to these specimens. The occurrence of such lesions was quite common at or after the age of puberty, but it was rather rare to have opportunities for making necropsies in such cases. He had frequently seen such lesions in living subjects, and in one case in which death occurred he had found the appearances exactly parallel to those just described. And when such patients did die from the effects of the syphilis, it was usually, as Dr. Coupland had remarked, from the supervention of nephritis.

Dr. Barlow said this liability to nephritis was a very important feature. He had recently seen an instance of this at the Great Ormond-street Children's Hospital, in a child who was the subject of well-marked hereditary syphilis and died of parenchymatous nephritis. There was no history of scarlatina or of any of the other conditions likely to set up the renal disease.

Dr. Mahomed thought the parenchymatous nephritis in these cases might be due to a primary lardaceous change. He had seen a few cases of granular contracted kidney in the subjects of congenital syphilis, but he had found that these kidneys were also the seat of lardaceous change, which he inferred had led to the other renal condition. So, too, lardaceous change might be the primary renal lesion in these cases of tubular nephritis. And as lardaceous change could not always be detected without microscopical examination, he would ask whether such an examination had been made in these cases.

Dr. W. Ewart had found lardaceous disease of the kidneys common in the subjects of syphilis who had died at about the age of puberty. He cited the case of a woman who died at the age of twenty-three. From her twelfth year she had suffered from syphilitic lesions, and during the later years of her life renal disease was also present. At the autopsy he found nodes on the cranium and dura mater, with syphilitic meningitis. There were three large gummata in the spleen, but none in the liver. There was extensive lardaceous degeneration of the kidneys and other organs, and the kidneys were also the seat of interstitial mischief. He would therefore question whether lardaceous degeneration was not always the primary change in these renal complications of syphilis.

Dr. Moore had seen a case in which there were undoubted evidences of acquired syphilis, and in which the kidneys were found to be markedly granular with puckered scars, but without any trace whatever of lardaceous change on careful microscopic examination.

Dr. Barlow added that also, in the case he had cited, the microscope had failed to detect any lardaceous change. There was often a fibrous change in the liver and spleen without any lardaceous disease.

The President added that, in the case he had mentioned, he was unable to give the results of a microscopic examination; but there had been no suggestion whatever made by Dr. Sutton of the possibility of lardaceous change in the kidneys. That patient's case was further remarkable from the fact that his liver used to swell greatly at times, subsiding again on treatment. At the autopsy that organ was not enlarged, though it had sometimes attained twice its normal size during life; and it presented only very slight patches of capsular thickening. There had been albuminuria for about one year before death, with hæmaturia now and then.

Dr. Coupland stated that in his cases the most careful microscopic examination had failed to discover in any of the viscera the slightest trace of lardaceous disease, which he had certainly expected to find. In the kidneys the changes were mainly epithelial; only slightly interstitial. Dr. Coupland also exhibited, by card, specimens from a case of syphilis, in which there were the following lesions:—Osteitis with ulceration of the skull, gummatous infiltration

of dura mater, cerebral endarteritis, gummata in the spleen and lungs (?), and fibroid testes.

Malformation of Heart; with Remarks on the Causation of Cyanosis and of Clubbing.

Dr. Lees exhibited a malformed heart, in which the aorta and pulmonary artery were transposed, taken from a male child, seven months old, who had been both cyanosed, especially in the upper part of the body, and also very short of breath all along from birth. He was under the care of Dr. Lees at the Great Ormond-street Hospital for four months, and when first seen was intensely cyanosed in the head and upper limbs, decidedly less so in the trunk and lower extremities. There was not, however, the least trace of clubbing. The heart was found to be large, and the pulse was above 160. There was heard no bruit whatever at first, but the second sound was strongly accentuated at the base. The chest in general was somewhat hyper-resonant. A systolic bruit, best heard at the left base of the heart and towards the left clavicle, and also behind in the upper interscapular region, became developed when the child was five months old, but before his death this basic bruit became much less audible, and latterly there was heard only an occasional bruit towards the apex. At the autopsy, of two parallel vessels arising from the base of the heart, the one connected with the right ventricle proved to be the aorta. It gave off normally the coronary arteries, the innominate, left carotid, and left subclavian. It then became narrowed, and joined the ductus arteriosus to form the descending aorta. The other, and considerably larger, vessel which arose from the left ventricle was the pulmonary artery. It divided normally into two branches for the lungs, and gave off a patent ductus arteriosus. The descending aorta must, apparently, have received its blood-supply in about equal proportions from the aorta and pulmonary artery. There was a deficiency of the interventricular septum large enough to admit a common cedar pencil, and the pulmonary artery had doubtless received blood from both ventricles. The right ventricle was hypertrophied, its walls being as thick as those of the left. All the valves were normal, except that the mitral was slightly thickened. Thus the head and arms must have received only venous blood, the rest of the body being supplied with blood partially arterialised. The blood of the pulmonary circulation must have been nearest arterial of any in the whole body. The deeper cyanosis of the head and upper limbs, and the persistent dyspnœa, were probably accounted for by this peculiar circulation, the latter symptom being perhaps the result of the fact that the respiratory centre in the medulla had an entirely venous blood-supply. The mother of the child had received a severe shock when about six weeks pregnant. When she was bathing along with several other women, two of them sank, and were rescued with great difficulty. That day she had repeated vomiting followed by diarrhœa, and felt very ill. A strong impression must, therefore, have been made on the abdominal ganglia of the mother then; and embryologists name the sixth, seventh, and eighth weeks as the period of the formation of the septa of the heart. This circumstance might perhaps have had something to do with the child's malformation. The mother had previously given birth to a deformed still-born child—one of twins. It had no nose, but one large central cloaca; and the mother attributed this malformation to her having seen, when pregnant, a woman who had had her nose and upper lip eaten away by lupus. Four cases of transposition of the aorta and pulmonary artery had been previously reported in the Society's *Transactions*, but the case now described differed somewhat from each and all of these, and it seemed to the speaker to throw much light on the moot questions of the exact causation of congenital cyanosis and of clubbing. Dr. Lees remarked that Stillé had shown clearly that the theory which explained cyanosis as due to the intermixture of venous and arterial blood by means of abnormal openings in the heart was quite insufficient to account for the facts. Stillé himself ascribed cyanosis to congestion of the venous system, and Dr. Peacock had adopted the same explanation. But this theory could not apply to the case now reported, for although there was intense cyanosis there could have been no venous congestion, the circulation through the heart, large vessels, and lungs being perfectly free, and the latter fully expanded. A third explanation, which, the speaker thought, would account for all cases of congenital cyanosis as well as for the various shades of lividity occurring as the result of disease, was a deficiency in the aëration of the blood. This was the one common feature in all these cases. In the case now reported, aëration must have been very partially performed, for almost the same portion of blood was continually passing between heart and lungs without going through the general systemic circulation, and the deepest cyanosis was seen in the parts receiving blood which had not passed through the lungs at all. This theory would also explain cases of cyanosis or lividity associated with contraction or obstruction of the pulmonary artery, or with obstruction in the right ventricle, for here we have not merely congestion, but congestion of non-aërated blood. And the theory is not the intermixture theory in another form; for many remarkable instances have proved that considerable intermixture may take place in the heart without producing cyanosis, and in a case like the present a freer intermixture would have acted in the direction of improving the aëration of the general mass of the blood. Dr. Lees supported his explanation by the results of his analysis of twenty-five cases of cardiac malformation reported by Dr. Peacock. Then as to the clubbing of the fingers and toes, the complete absence of this condition in the above case, in which cyanosis was so well marked, seemed sufficiently accounted for by the absence of systemic venous congestion. Here again his analysis of Dr. Peacock's cases supported the speaker's contention, clubbing being seldom found, even in cases of malformed heart, when a patent foramen ovale relieved the tendency to blockage on the right side. Cases reported by Dr. Pye-Smith and Crocker were also cited in confirmation.

Dr. N. Moore thought that the fright which the mother had sustained had had no causal connexion with the malformation of her child. There was evidently a distinct tendency to malformation in this woman's children. She had previously had one malformed child, and had had twins, which Dr. Matthews Duncan had shown to be one form of blight.

Dislocation forwards of First Phalanx of Thumb.

Mr. F. S. Eve exhibited this specimen, taken from a man who had been killed by the falling of an archway. The phalanx rested on the front of the metacarpal bone, the back of the capsule being ruptured. Flexion readily reduced the dislocation. This injury was of rare occurrence; Mr. Wood had recorded an instance in vol. iv. of the Society's *Transactions*, and Hamilton had cited ten cases.

The Pathology of Granular Contracted Kidney.

Dr. R. Saundby (of Birmingham) exhibited several drawings, illustrative of the pathology of Granular Contracted Kidney. After sketching the history of this chapter of pathology, the speaker stated that, after repeated careful microscopic examination, he had found reason to set aside the theory of interstitial nephritis, and to accept the view adopted by Dr. George Johnson and others in this country that the essential lesion is a parenchymatous change. The hyaline-fibroid theory of Sir W. Gull and Dr. Sutton the speaker found untenable as a sufficient explanation. He had been led to this conclusion from working at cirrhosis of the liver, concerning the important epithelial transformations in the hypertrophic form of which he had made some observations before the Society last session. He had found similarly in contracted kidneys that the renal epithelium seemed to undergo important changes. The protoplasm became diminished in size in the tubules, which were by-and-by filled with small cells, changing into spindle cells, and ultimately into fibrous tissue. This epithelial transformation and atrophy seemed to be the main feature in this disease. This process of epithelial atrophy, called in French "embryonic transformation," took place markedly in the capsules of the glomeruli, and thus probably the great majority of renal cysts were formed. As to the condition of the arterioles, he had found that, along with an increase of the fibrous tissue of the adventitia and intima, there was a marked hypertrophy of the muscular coat. The latter, however, he thought was the result, not of spasm, but of chronic renal hyperæmia; for amongst the earliest conditions of chronic Bright's disease was the imperfect action of the bowels and skin, and thus a great chronic strain was thrown upon the kidneys. Hypertrophy of the arterial muscle always supervened upon chronic hyperæmia in any tissue.

Dr. Greenfield was glad that attention had been called

to this subject, but he thought it would be improper to discuss it until Dr. Saundby had brought his specimens and a fuller description of them before the Society. The subject, moreover, probably could never be discussed on the basis of any one hypothesis. His own observations had certainly led him to adopt different conclusions from what had just been advanced. But the Society would doubtless be glad to have soon a fuller explanation from Dr. Saundby.

Dr. Mahomed had also adopted very different views from those just stated by Dr. Saundby regarding the contracted kidney. What the latter had just now been calling altered epithelium, he (Dr. Mahomed) had always regarded as connective tissue. Could the tubular epithelium wander through the basement membrane and become transformed into the connective tissue, seen in such abundance? He would be glad if Dr. Saundby would take an early opportunity of exhibiting his specimens to the Society.

Dr. Saundby, at the request of the President, promised to exhibit his specimens and bring the subject more fully before the Society on another occasion.

Membranous Inflammation of Air-Passages (Non-Diphtheritic).

Dr. Pye-Smith exhibited the false membrane from the air-passages of a woman, aged twenty-three, who had suddenly become very ill, on December 25, with shivering, vomiting, and cough. Next day some shreds of false membrane were expectorated, and on the 27th she brought up the membrane exhibited, which formed a large arborescent cast of the trachea and bronchial tubes. On the 29th, when he first saw her, there was great dyspnœa, with moderate fever, but no membrane could be seen in the fauces. On the 30th she was delivered prematurely of a child. Pneumonia supervened, the dyspnœa increased, and death occurred a week after the illness began. Post-mortem, the fauces appeared healthy, and presented no false membrane. The larynx, trachea, and bronchial tubes had an inflamed appearance, but contained only two or three shreds of false membrane. The expectorated cast resembled the membranes of plastic bronchitis, but the absence of hæmorrhage on its removal, and the acute character and fatal issue of the case differentiated it from plastic bronchitis. For several reasons the case, he thought, could not be called one of diphtheria. Thus, it was quite isolated, no other cases of diphtheria, typhoid, or scarlet fever having occurred in the neighbourhood, which was found to be free from any local source of poison. Again, there was a bsence of the asthenia which is so marked a feature in diphtheria; acute asphyxia, like that described in the classical accounts of croup, being the prominent symptom. There was, moreover, no swelling of the neck or of the cervical glands, and no lesion of the fauces. Further, there was found, post-mortem, no evidence of general blood-poisoning; firm blood-clots were in the heart, and there was no swelling or ecchymosis of the spleen, and no staining by the bloodvessels. There had, finally, been no albuminuria, and the kidneys were found to be healthy. In fact, the case seemed to him to be one of non-diphtheritic membranous inflammation of the air-passages, due to cold; and, occurring as it did in an adult, it seemed exactly the kind of case that had been asked for during the recent inquiry into croup and diphtheria.

Dr. Semple thought the case truly one of diphtheria, though it presented certain difficulties. The non-appearance of false membranc in the air-passages after death was due to the fact that it had previously been coughed up. It was, moreover, well known that diphtheria occurred sporadically sometimes, and there were also cases in which the fauces were unaffected.

Dr. Shadwell, in whose practice the case occurred, gave corroborative evidence as to the isolated character of the case. Though the woman lived in a small house with her husband and several children, none of them, before or since, had had diphtheria or any analogous affection. It was stated that full notes of the case, especially in relation to the question of contagion, will be forthcoming.

Malignant Growth in Right Lung and Left Auricle.

Dr. Norman Moore showed this recent specimen, taken from a man aged fifty. During life the symptoms were those of bronchitis, and no physical signs of a tumour were noticeable except those due to the great emphysema of the left lung. The growth was confined to the right lung and heart. A great mass extended from the root a little way into the lung, and another part of the growth penetrated one pulmonary vein and the wall of the left auricle. The left auricle was almost filled by a mass larger than a tennis-ball, attached only at the posterior part of the auricle near the septum, and continuous with the pulmonary mass. The nature of the growth had not been determined, but the mass in the auricle seemed very vascular.

The following specimens were also exhibited by card. (In regard to the card specimens it may be mentioned that the President now calls attention to them in their order among the other specimens, instead of naming them all together.)

By Dr. Robert Smith—Œsophagus and Stomach from a case of Carbolic Acid Poisoning.

By Mr. F. S. Eve—Dislocation upwards of the Acromial End of the Clavicle with Fracture of the Clavicle.

By Dr. W. Ewart—1. Congenital Malformation and Cystic Degeneration of the Left Kidney. 2. Two Complete Ureters on Each Side. 3. Fibrous and Calcareous Changes in both Supra-renal Capsules, perhaps of Syphilitic Origin. In regard to this specimen, Dr. Ewart stated that there had been no symptoms of Addison's disease in the case, and, indeed, no suspicion that the capsules were affected. Death was due to parenchymatous nephritis after scarlet fever. There was found what appeared to be a node in the skull, and there were no evidences of struma or tubercle. 4. Mucous Membrane of Bladder showing Miliary Tubercles in the absence of Tubercle elsewhere.

By Mr. Hulke—Drawings of Cancer of the Breast.

OBITUARY.

EDWARD CATOR SEATON, M.D. Edin., F.R.C.P. Lond.

Dr. Seaton was the son of a Surgeon in the Naval Medical Service, who, having retired on half-pay, had settled in the town of Rochester. He received there his early education, and afterwards studied for the medical profession at Edinburgh. The period of his studentship was always looked back upon with pleasure, for it was then that he formed some of his longest and most valued friendships. He was intimately associated with Professor Allen Thomson, and he was the pupil and intimate friend of Dr. Sharpey, to whom he was always closely attached, and to whose pleasant companionship he owed many happy hours during the last few years of his life. After terminating his career at Edinburgh in 1837, he studied for a short while in Paris, and then joined his father at Rochester, holding the appointment of Surgeon to the North Aylesford Union. Two or three years later he left that neighbourhood, and having purchased the interest in a small practice in Chelsea, settled in Sloane-street, where he remained for twenty years. He succeeded in establishing there a fairly good practice, which latterly would have become much more extensive had it not been for the occasional official work which he undertook. Whilst in Sloane-street he took a very active part in founding the Western Medical Society, of which he was secretary, librarian, and afterwards President; he also held the appointment of Surgeon to the Chelsea Dispensary. As a private practitioner he was much liked and respected by his professional brethren, and his departure from among them was greatly regretted.

Dr. Seaton was connected with the Epidemiological Society at its foundation, and it was as its honorary secretary that he first became associated with that branch of public-health work with which his name has become so intimately connected. The first subject that engaged the attention of this Society was "Small-pox and Vaccination," a committee of its members being appointed to conduct inquiries connected therewith. "This committee, having obtained from foreign governments the communication of most important statistical facts as to the decline of small-pox, reported (*inter alia*) their results to the Society. Soon afterwards this valuable Report (specially the work, I believe, of Dr. Seaton, honorary secretary to the committee) was ordered to be printed for presentation to both Houses of Parlia-

ment." (*Vide* Simon, "Papers relating to the History and Practice of Vaccination," 1859: *Report of General Board of Health.*)

The Compulsory Vaccination Act, 1853, was mainly the outcome of this Report. Important papers were also contributed by Dr. Seaton about this time to the *Transactions* of the Society, especially one upon the "Protective and Modifying Powers of Vaccination." In 1858, Mr. Simon, who had then become Medical Officer to the Privy Council, and with whom he had previously been in relation as Medical Officer to the General Board of Health, enlisted his services as an inspector. For the first two years the work was only occasional; it then became continuous; and, as will be seen by reference to the periodical reports, he was constantly engaged in inquiring into and reporting on the state of vaccination in the metropolis and various parts of the country. The result of these investigations and those of his colleagues was to show the very deficient state of public vaccination, and to procure an amendment of the law with regard to it. During the next four years he was more unsparing of himself than ever, for not only did he carry on his arduous official duties as inspector, but all his leisure time was occupied with the subject which so much engrossed him. His article on "Vaccination," in "Reynolds' System of Medicine," appeared in 1865; and in 1868 he published his well-known "Handbook of Vaccination," a work which cost him a large amount of labour in the preparation. These writings, together with his famous Report on Animal Vaccination, and that in the New Local Government Board Series, in 1874, "On the Recent Small-pox Epidemic with reference to Vaccination," constituted his chief contributions to the literature of the subject.

But these represented a part only of the important services rendered by him to the public in relation to vaccination. It was by his constant and earnest devotion to the details of administrative work that he materially assisted in bringing about an improvement in the state of public vaccination, which, judged by the results, is certainly most remarkable. For the accomplishment of this task he brought to bear a great power of organisation, rare tact and judgment, combined with firmness—qualities which largely contributed to success, and enabled him to conciliate or overcome much of the opposition with which he had to contend. Some idea may be gathered of the amount of attention he gave to the work of administration by the simple statement of the fact that after the Medical Department of the Privy Council was transferred to the Local Government Board, *all* the public contracts (upwards of 3000 in number) were revised, every one of them, under his supervision, with an accuracy of detail which could not be surpassed.

Though chiefly known in connexion with his work in public vaccination, Dr. Seaton also paid considerable attention to other sanitary subjects, especially that of quarantine. He represented Great Britain in the Sanitary Conference held at Vienna in 1874; and his valuable Report and Memoranda on this subject are contained in the New Series of the Local Government Board Reports.

In 1876 he succeeded Mr. John Simon, C.B., F.R.S., as Medical Officer to the Local Government Board, to which he had previously acted as Assistant Medical Officer. In this capacity he had constantly to deal with questions of general sanitary science and administration, in which his sound, clear judgment proved of great value.

Dr. Seaton may be said to have enjoyed very good health until the last two or three years of his life. He was very regular and careful in his habits, seeming to delight in mental work of every kind, but at the same time never neglecting to take a healthy amount of bodily exercise. Rather more than a year after he became Medical Officer to the Board his health began to fail him. The work had, from various reasons, been most unusually trying to him, and of a nature that would probably have taxed the strength of a much younger man. It was then he suffered from an illness which, looked upon by the light of subsequent events, must be regarded as the first evidence of the disease which carried him off. He went on, however, with his work, and it was not until a year later that he yielded to persuasion and consented to take medical advice. Sir W. Jenner recommended him rest and change for six months, and arrangements had already been made for carrying this recommendation into effect when he received news from India of the sudden death of his youngest and dearly-loved son, just entering on a career of bright promise. This disaster made a deep impression on Dr. Seaton, but, notwithstanding the depressing circumstances, he adhered to his original intention of taking the latter and chief part of his leave abroad. He returned in June, appearing better and feeling quite well enough and anxious to return to work. The improvement, however, was apparent only, for in October, while on a short visit in Warwickshire, he was seized with an attack of right hemiplegia. As soon as he could be moved with safety he was brought to the residence of his son-in-law at Notting-hill. Here he seemed to be making steady though rather slow improvement, and there was every appearance of his recovering to such an extent as to enable him to enjoy life for some time to come, when on January 19 he was seized again, and died on the 21st, at the age of sixty-four, deeply lamented by his sorrowing family and a large circle of friends, who entertained for him the highest respect and a warm affection.

JACOB AUGUSTUS LOCKHART CLARKE, M.D., F.R.S.

Dr. Lockhart Clarke, who was born in 1817, died, after some months of illness, on January 25, in the sixty-fourth year of his age. His father, who was engaged in business, died when the subject of this memoir was young; and his mother, left with seven children, removed to France in order to give them educational advantages. On his return to England with his mother, Lockhart Clarke for the first time displayed any inclination for work. He entered the medical profession by studying at Guy's and St. Thomas's Hospitals, and, on obtaining the licence of the Apothecaries' Company, started in practice in Pimlico. He succeeded fairly well in practice, but he had acquired a love for research, which he found time to prosecute amidst the constant interruptions to which he was necessarily subjected. Apart from the value of the anatomical and pathological investigations he carried on, it is alike remarkable and beyond all praise that they were carried on side by side with the exactions and the anxieties of general practice. After many years devoted to his monumental labours, evidently with ulterior purposes, he re-commenced his studies at St. George's Hospital, and then became a Member of the Royal College of Surgeons. In 1864 he received the Royal Medal of the Royal Society in recognition of his valuable researches on the nervous system, which had chiefly been published through the medium of the Royal Society. In 1867 he was elected an Honorary Fellow of the King and Queen's College of Physicians, Ireland—a distinction alike honourable to the donors and the recipient. His special studies of the nervous system, carried out coincidently with the large experience gained in general practice, seemed to him to qualify for consulting practice in nervous diseases, and to this end we find him taking the degree of Membership of the College of Physicians, London, in 1871. He was then invited to become Physician to the Hospital for Epilepsy and Paralysis, Regent's-park, which office he accepted, and held until his deat

It is difficult to do justice to the great work of his life. His researches on the anatomy and pathology of the nervous system are world-known and world-honoured. By able and laborious investigations, by the employment of new methods of research which became the starting-point of the work of others, and by his extreme accuracy in all that he did, he advanced our knowledge in a truly remarkable manner, and threw new light upon one of the most difficult and obscure departments of medical science. Lockhart Clarke received little reward either from the State or the profession, but an imperishable memorial of his labours exists in the noble bequest of knowledge he has given to the world.

Ten years ago he had a severe attack of pleurisy. Whether this left any latent pulmonary disease is uncertain, but for some twelve months his health had been failing, and of late it was evident that the cause was phthisis, to which there existed a family tendency. A surgical complication of this disease led him to consult Mr. Henry Smith, whose care and skill saved him much suffering. He was seen in his last illness by Dr. Hughlings-Jackson and Dr. Stephen Mackenzie. Many friends would have been glad of the privilege of serving him, but he was, though kind-hearted and generous, very reserved, and few knew of his illness. He passed away quietly in the first hour of January 25.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having undergone the necessary examinations, were admitted Members of the College at a meeting of the Court of Examiners on the 22nd inst., viz.:—

Butler, George R., Yarmouth, student of St. Thomas's Hospital.
Farmer, Ernest W. W., Boulogne-sur-Mer, University College Hospital.
Gubbin, George F., Brixton-road, of the Westminster Hospital.
Harris, F. W. H. D., Ivy Bridge, Devon, of University College Hospital.
Harper, Charles J., Hadleigh, Suffolk, of Guy's Hospital.
Hatton, George S., Newent, Gloucestershire, of St. Thomas's Hospltal.
Hawkins, Frederick D. C., Clapham, of St. George's Hospital.
Jacob, Henry G., Southsea, of the Charing-cross Hospital.
Peck, Edward G., Cambridge, St. George's Hospital.
Powell, Henry A., University-street, University College Hospital.
Winterbottom, Charles, Sloane-street, of St. George's Hospital.

Fifteen candidates were rejected. The following gentlemen were admitted Members on the 23rd inst., viz.:—

Atkin, Charles, Sheffield, student of Guy's Hospital.
Billiald, Richard A., Nottingham, of King's College Hospital.
Bissill, Arthur H., L.S.A., Sleaford, of St. Bartholomew's Hospital.
Buckell, Arthur E., Chichester, of University College Hospital.
Gilkes, Malin D'O., Leominster, of Guy's Hospital.
Harries, Arthur J., Llanelly, Carmarthen, of University College Hospital.
Henty, Sydney H., Camden-road, of University College Hospital.
Knight, William, Sutton, of St. Bartholomew's Hospital.
Mathews, Sidney R. H., Bickley, of Guy's Hospital.
Palmer, John, Langport, Somerset, of King's College Hospital.
Phelps, Philip, Weston-super-Mare, of St. Bartholomew's Hospital.
Phillips, Lawrence W. K., Brighton, of Guy's Hospital.
Sers, Clement H., Lewisham-road, of St. Thomas's Hospital.
Smith, James S., Salisbury, of Guy's Hospital.
Towlson, Harry J., Wingfield, Derbyshire, of St. Bartholomew's Hospital.
Whitworth, William, St. Agnes, of Guy's Hospital.

Ten candidates were rejected. Of the total number of those examined (128) no less than forty-eight having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their professional studies for six months; and six gentlemen having passed in Surgery, will be admitted Members of the College when qualified in Medicine.

APOTHECARIES' HALL, LONDON.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, January 22:—

Baines, Harold Athelstane, Saxon Villa, Lincoln.
Bissill, Arthur Kent, Sleaford, Lincolnshire.
Conolly, Paul Bennet, Somerset-terrace, Kilburn.
Chenai, Eduljer Sorabjee, Chandos Villa, Lorn-road, Brixton.
Hakim, Hormadji Merwanji, Chandos Villa, Lorn-road, Brixton.
Kelâwâlâ, Manckshaw Jamshedji, Cromwell-road, Bayswater.
Karanjia, Merwanji Dhunjibhai, Chandos Villa, Lorn-road, Brixton.

The following gentlemen also passed their Primary Professional Examination:—

Orton, Arthur, Queen's College, Birmingham.
Puddicombe, William Noble, Guy's Hospital.
Williams, Walter Treliving, London Hospital.

At the Preliminary Examination in Arts, held at the Hall of the Society on January 23 and 24, 100 candidates presented themselves, of whom the following passed and received certificates of proficiency in General Education. In the first class, in order of merit, viz.:—

1. C. H. Upham. 2. Mary Royce. 3. C. H. Conolly and Arthur Wright. 4. A. F. Messiter. 5. E. E. Batt, R. H. Castor, B. Rigby Johnston, T. G. McLaren, and F. H. Mead.

In the second class, in alphabetical order, viz.:—

H. W. Austin, Arthur Badcock, E. E. Barclay, R. S. Betts. A. H. Bird, E. J. Bower, Gilbert W. Brooks, Jabez P. Brooks, K. F. Brown-Constable, G. C. Buchanan, F. J. Calvert, J. A. Coles, E. P. Collett, R. Cordiner, H. A. W. Coryn, W. H. Crago, W. E. Eppstein, R. Fetherstonhaugh, E. Gumpert, Kathleen H. Graham, E. Gregson, H. Gurney, E. M. Hassard, W. Hook, S. Hurlbutt, H. Hutchinson, H. W. Husbands, C. H. Jackman, F. P. R. James, S. H. Johns, Osborne Johnson, David E. Jones, Hedley G. Jones, C. R. King, A. G. V. Leech, William J. Lewis, H. E. M. Long, Montague Moore, R. Powell, J. P. Roughton, H. S. Saunders, J. B. Sutton, George Thorpe, A. H. Vlieland, J. Wilding, Charles Wisken, and H. P. Ziemann.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to all new Appointments that take place.

MORITZ, SIEGMUND, M.D.—Assistant Medical Officer to the Royal Infirmary, Manchester.

WILKINSON, A. T., B.A., B.L., M.B. Lond.—Assistant Medical Officer to the Royal Infirmary, Manchester.

WRIGHT, G. A., B.A., M.B. Oxon., F.R.C.S. Eng.—Resident Surgical Officer to the Royal Infirmary, Manchester.

BIRTHS.

BAKER.—On January 22, at 3, Phillimore-gardens, Kensington, the wife of A. de Wiuter Baker, L.R.C.P., of Dawlish, prematurely, of a daughter.

BATE.—On January 27, at 2, Northumberland-houses, Hackney, the wife of George Paddock Bate, M.D., of a son.

BENTON.—On January 25, at The Cottage, Bushey Park, the wife of Samuel Benton, M.R.C.S., of 2, Bennett-street, St. James's, of a son.

CONRY.—On January 23, at Alladale, Woolston, the wife of Staff-Surgeon Conry, R.N., of a daughter.

FENNINGS.—On January 25, at 81, Clarendon-road, Notting-hill, W., the wife of Allen Fennings, L.R.C.P., of a daughter.

HETT.—On January 25, the wife of Geoffrey Hett, M.D., of 1, Ledbury-road, W., of a daughter.

MAUNSELL.—On January 9, at Halifax, Nova Scotia, the wife of T. Maunsell, Surgeon-Major A.M.D., of a daughter.

NAISMITH.—On January 20, at Allaway Place, Ayr, N.B., the wife of W. G. Naismith, M.D. Edin., of a daughter.

ROBATHAN.—On January 25, at 20, York-villas, Brighton, the wife of G. B. Robathan, M.R.C.S., of a son.

STANGER.—On January 20, at Hardy House, Wakefield, the wife of W. Stanger, F.R.C.S., of a son.

WALKER.—On January 22, at The Elms, Parkhurst, Isle of Wight, the wife of George E. Walker, L.R.C.P., of a daughter.

YOUNG.—On January 19, at Rose Bank, Merton-road, Bootle, near Liverpool, the wife of T. Frederic Young, L.K.Q.C.P., M.R.C.S., of a son.

MARRIAGES.

CRAWFORD—LUSCOMBE.—On January 20, at Ahmednagur, Charles Edward Gordon Crawford, Esq., Bombay Civil Service, to Alice Luscombe, eldest daughter of Surgeon-Major M. M. Mackenzie, Bombay Army.

DICK—BRABAZON.—On January 22, at Bath, John Semple Dick, Esq., formerly of Singapore and Batavia, to Leonora Harriet Jocelyn, second daughter of A. Beaufort Brabazon, M.D., of Bath.

HERBERT—OVERMAN.—On January 20, at Hemel Hempstead, Jonas Travers Herbert, L.R.C.P., of Markyate-street, Dunstable, to Margaret Elizabeth, youngest daughter of the late Thomas W. Overman, Esq.

URQUHART—REID.—On January 21, at Kepplestone, Aberdeen, Alexander Reid Urquhart, M.D., Physician-Superintendent of Murray's Royal Asylum, Perth, to Agnes, youngest daughter of George Reid, Esq.

DEATHS.

REYNOLDS, MARGARETTA SUSANNAH, the wife of J. Russell Reynolds, M.D. of 38, Grosvenor-street, on January 28.

ROBBS, HENRY DENNY, M.D., at Grantham, on January 22, aged 47.

SEATON, W. E. C., M.D., F.R.C.P., of 14, Gordon-street, Gordon-square, late Medical Officer to the Local Government Board, at 48, Ladbroke-grove, W., on January 21, in his 65th year.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BRIGHTON AND HOVE DISPENSARY.—Resident House-Surgeon. Candidates must be members of one of the Royal Colleges of Surgeons of Great Britain or Ireland, and licentiates of the Royal College of Physicians, or of the Society of Apothecaries, London, and registered under the Medical Act. Applications, with testimonials, are to be sent to the Chairman of the Committee of Management, Brighton and Hove Dispensary, Queen's-road, Brighton, on or before Monday, February 2.

EVELINA HOSPITAL FOR SICK CHILDREN, SOUTHWARK-BRIDGE-ROAD.—Registrar and Chloroformist. Candidates must possess a recognised qualification. Applications, with testimonials, to be sent to the Committee of Management at the Hospital not later than February 5.

HUNGERFORD UNION.—Medical Officer. Candidates must reside in the district. Applications, with testimonials, to be sent to Mr. H. E. Astley, Clerk, on or before February 10.

HUNTINGDON COUNTY HOSPITAL.—House-Surgeon. Applications, with testimonials, to be sent to Philip Tillard, Esq., Shukeley Hall, Huntingdon, on or before February 6.

LONDON FEVER HOSPITAL.—Physician and Assistant-Physician. Candidates must be either Fellows or Members of the Royal College of Physicians, London. Applications, with testimonials, to be sent to the Secretary at the Hospital, Liverpool-road, Islington, not later than February 7.

ST. JOHN'S HOSPITAL FOR SKIN DISEASES.—Clinical Registrars. Applications to be sent to the Board of Management by candidates who will give their services gratuitously. Further particulars can be obtained from St. Vincent Mercier, Esq., Secretary.

WEST SUSSEX, EAST HANTS, AND CHICHESTER INFIRMARY AND DISPENSARY.—Surgeon. Candidates are requested to send in their applications to the Secretary, Mr. William Thomas Askey, House-Surgeon, at least eight days before the day of election, which takes place February 13.

WILLITON UNION, SOMERSET.—Medical Officer. Candidates must reside in the district. Applications, with testimonials, to be sent to Mr. W. H. White, Clerk, on or before February 9.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATION.

Hoxne Union.—Mr. J. D. Phillips has resigned the Hoxne District: area 6986; population 1686; salary £42 12s. per annum.

APPOINTMENTS.

Boston.—James Baynes, jun., F.C.S., as Analyst for the Borough.

Bromyard Union.—J. W. Hinings, M.R.C.S. Eng., L.R.C.P. Edin., L.R.C.S. Edin., to the Second District.

Kidderminster Union.—John Spofforth, M.R.C.S. Eng., L.R.C.P. and L.M. Edin., to the Wolverley District.

Liskeard Union.—Charles Bainbridge Rendle, M.R.C.S. Eng., L.S.A. Lond., to the Sixth District.

North Bierley Union.—Robert Forsyth, M.D. and M.C. Glasg., to the Fourth District. Also John Lambert, jun., M.R.C.S. Eng., L.S.A. Lond., to the Thirteenth District.

Penzance Union.—Geo. T. Albert Staff, M.R.C.S. Eng., M.K.& Q.C.P.I., and L.M., to the Third District.

Sandwich.—Mr. S. Harvey as Analyst for the Borough until November 9 next.

Tendring Union.—Arthur Somers Iven, M.R.C.S. Eng., L.R.C.P. Edin., to the Eighth District.

Ticehurst Union.—Thomas Edward Darley Hayes, M.R.C.S. Eng., L.S.A. Lond., L.K.& Q.C.P.I., to the Bodiam District.

Worcester Union.—Joseph R. Buck, L.R.C.P. Edin., M.R.C.S. Eng., to the Workhouse.

The Association of Surgeons Practising Dental Surgery.—This youngest of our medical associations dined at the Langham Hotel on the evening of the 20th inst., and entertained in the most hospitable manner a large number of guests, among whom were the Presidents of the Royal Colleges of Physicians and Surgeons, and of the Medical Society of London, Sir William Gull, Mr. Lister, etc. The evening was a most pleasant and enjoyable one—nothing being overdone, and everything well done.

Treatment of Typhoid Fever in the Philadelphia Hospitals.—The remedies that have been found in the University Hospital to exert the most beneficial influences on the intestinal catarrh are, first of all, nitrate of silver, and next, subnitrate of bismuth and carbolic acid. The carbolic acid is used when there is any putrid element in the disease, in preference to the nitrate of silver. When the stools are large and watery, opium is combined with the silver; when there is tendency to constipation, belladonna replaces the opium. The dict is carefully regulated. Milk is found to be the best diet, and is combined with water or lime-water, as the case requires. When the bowels are torpid, beef or mutton broth is given alternately with the milk. When the fever runs high, all the food the patient can take is given, care being taken not to irritate the already inflamed mucous membrane. The poison in the blood is controlled by quinia and nitro-muriatic or salicylic acids, the latter being preferred when there is some putrid discharge joined with high fever. About twelve grains of quinia are given in the twenty-four hours. The temperature is kept down by preventive measures, rather than by cold baths; but when it runs up high, in spite of drugs, sponging with a mixture of water and bay rum, every two hours, is resorted to. When the temperature goes as high as 104° or 105°, the cold wet sheet is used; and when life is endangered from fever, the cool bath is employed. The use of stimulants is not regarded as necessary, simply because the patient has fever; but they are employed for the relief of certain symptoms, such as ataxic nervous disturbances, circulatory disorders, and profound asthenia. The mild form, as whine whey, is preferred. Hæmorrhage is controlled by opium, ergot, and lead. Peritonitis is treated by antiphlogistics, sedatives, and perfect rest, with a diet that leaves no irritating residuum in the bowels. True perforation is regarded as beyond the aid of medical skill. In the German Hospital, quinine (in heroic doses), after a fair trial, has been found to do very little if any good. It has not even been satisfactorily demonstrated that it reduces the temperature, while it appeared to increase the diarrhœa and headache; and in two cases it produced total deafness for two weeks. Sponging with vinegar and water has been found to act well, and the patient is given ice to suck, and the ice-cap is applied. Oil of turpentine, in twenty-drop doses every hour or two, is found to act well where there is a dry tongue and tympanites. The mineral acids are found to be of great service in keeping the stomach in good order, stimulating appetite, and relieving the thirst. For the relief of wild delirium, hypodermic injection of one-third to one-half of a grain of morphine acts well. In the Episcopal Hospital, the temperature is reduced and the heart strengthened by fifteen-drop doses of digitalis and two-grain doses of quinine every three hours. Stimulants are employed only in the severer cases. Dilute muriatic acid in fifteen-drop doses every three hours, and lately the nitrate of silver, have been used, in the second week of the disease. In the Pennsylvania Hospital the routine treatment is ten grains of quinine daily, ten drops of muriatic acid every three hours, and sponging all over with cold water morning and evening. The diet is carefully regulated, consisting chiefly of milk and beef-tea. When the first sound of the heart is weak, stimulants are given, or, if they are already being taken, the dose is increased.—*New York Med. Record.*

Obstetrical Society of London.—The following is the list of members proposed by the Council of this Society for election as officers, at the annual meeting on Wednesday evening, February 4, at eight o'clock:—*Honorary President:* Arthur Farre, M.D., F.R.S. *President:* Wm. S. Playfair, M.D. *Vice-Presidents:* *John Bassett, M.D. (Birmingham), Arthur W. Edis, M.D., John Baptiste Potter, M.D., George Roper, M.D., *John Williams, M.D., Robert James Wilson, F.R.C.P. Ed. (St. Leonards). *Treasurer:* Henry Gervis, M.D. *Honorary Secretaries:* Clement Godson, M.D., *Alfred Lewis Galabin, M.A., M.D. *Honorary Librarian:* *George Ernest Herman, M.R.C.P. *Other Members of Council:* John Wright Baker (Derby), R. S. Fancourt Barnes, M.D., Percy Boulton, M.D., *Charles Henry Carter, M.D., *Francis Henry Champneys, M.A., M.B., *Richard Cross, M.D. (Scarborough), Robert Cory, M.B., Jas. Matthews Duncan, M.D., George Eastes, M.D., *Wm. Thos. Greene, M.A., M.D., Henry W. Kiallmark, C. Dudley Kingsford, M.D., *David Lloyd Roberts, M.D. (Manchester), *Frederick W. Salzmann (Brighton), Thomas Savage, M.D. (Birmingham), *Charles B. Sewell, M.D., Thomas J. Walker, M.D. (Peterborough), *Frederick Wallace. (Those gentlemen to whose names an asterisk is prefixed were not on the Council, or did not fill the same office last year.)

Oxalic Acid in Diphtheria.—Upon the strength of the success which he has met with from its employment in eighteen cases observed during an epidemic of diphtheria in which all the usual remedies proved of no avail, Dr. Cornilleau recommends the trial of oxalic acid or oxalate of potash. His attention was drawn to this substance by the asserted success of a popular remedy which contained it. His formula is as follows:—Pure oxalic acid 1½ grammes, infusion of green tea 120 gr., syrup of bitter orange-peel, 30 gr.; a dessert-spoonful every three hours. Besides this a cup of tisane made by infusing 100 gr. of sorrel-leaves in 1000 gr. of boiling water should be taken every hour. Great amelioration is observed after the third day of treatment, convalescence setting in about the end of the first week. The diet should be supporting, and the regimen tonic and stimulating.—*Rev. Méd.*, January 24.

The Metropolitan Water-Supply for December last.—The report of the Examiners of the Metropolitan Water supply for the month of December last shows that the slight improvement recorded in the previous month's return has been well maintained. The state of the water in the Thames at Hampton, Molesey, and Sunbury, where several of the London companies derive their supplies, was good throughout the month, except on the 30th and 31st, when it was very turbid and bad. The water in the river Lea was generally good during the month. These remarks refer to the condition of the water previous to filtration. The water at all the intakes was generally in a good condition throughout the month of December, and the filtration was efficient, the water supplied by all the London companies having been clear, bright, and properly filtered. Turning to Dr. Frankland's report, we find that the Thames water supplied by the Chelsea, West Middlesex, Southwark, Grand Junction, and Lambeth Companies was of superior quality considering the season of the year, the West Middlesex water being again distinguished by its comparative freedom from organic impurity. The Lea water distributed by the New River and East London Companies was slightly inferior to Thames water, a circumstance of extremely rare occurrence. All the river water was efficiently filtered before delivery. The deep-well water supplied by the Kent and Colne Valley Companies and by the Tottenham Local Board of Health was, as usual, of excellent quality.

Paris Night-Service.—Dr. Passant reports that the total number of cases to which the registered medical officers were summoned during 1879 was 5282, men constituting 36 per cent., women 50 per cent., and children 14 per cent. The visits paid during the last quarter of 1879 were 1468, as compared with 937 in 1878. Of these, 389 were paid for affections of the respiratory organs, 187 for affections of the

abdomen, 28 for hernia, 17 for retention of urine, 192 for metrorrhagia, abortions, and deliveries, 312 for affections of the brain and nervous system; for external and internal hæmorrhages 86, wounds and contusions 62, fractures and dislocations 31, and asphyxia from charcoal 14. In 43 instances the persons were dead before the doctors arrived.—*Gaz. des Hop.*, January 22.

POPULATION OF BRUSSELS.—The progress of population in Brussels during the last ten years has been as follows:—In 1870 it was 166,706, and in 1879, 175,188. There were 5984 births in 1870, and 5718 in 1879; the marriages were 1739 in 1870, and 1580 in 1879; the divorces were 22 in 1870, and 36 in 1879; and the deaths 5016 in 1870, and 5590 in 1879. The mean annual increase of population during this period has scarcely surpassed 1000 inhabitants. The mean annual increase of the decade 1860-69 was 1400, and of the decade 1850-59, 1500. From 1830 to 1879 the total increase of population has been 20,000, giving an annual mean of about 670.—*Presse Méd. Belge*, January 18.

ANECDOTE OF M. RICORD.—In relation to the heroic deaths of hospital pupils occurring while in attendance on cases of diphtheria, the *Union Médicale* (January 13) reprints an account which it published in 1849 of the admirable conduct of M. Ricord in an urgent case which came under his care. A man was admitted into his hospital with syphilitic tubercles situated on the arm and scrotum. He suffered also from loss of voice and extreme dyspnœa. After carefully examining all the circumstances of the case, M. Ricord came to the conclusion that these latter symptoms arose from syphilitic tubercles of the larynx; and knowing how rapidly iodide of potassium relieved the symptoms of tertiary syphilis, he was in hopes by its aid to prevent the necessity of tracheotomy. But the day after his admission the patient was seized with such excessive dyspnœa that the urgency of tracheotomy became obvious. M. Ricord on that day was himself suffering from a violent cholerine, but, in spite of all persuasion, he insisted on performing himself what would probably prove a very fatiguing operation. The man was scarcely able to breathe, and no sooner had the operatiou been commenced than he seemed no other than a corpse in the surgeon's hands, the pulse and respiration ceasing. All seemed to be finished, when M. Ricord, "rising to that height which converts medicine into a priesthood," rapidly opening four riugs of the trachea down from the cricoid, and, casting aside all feeling of repugnance which the presence of the surface of an open blister might have inspired, applied his mouth to the artificial aperture, aspired the blood and pus which obstructed the trachea, and blew air into the lungs. This procedure renewed fifteen or twenty times at last restored life to what seemed a corpse, amidst the loud applause of a large class. M. Ricord, his face covered with blood and his mouth filled with the pus from the tuberculous larynx, never thought of ablution until all danger was over. His diagnosis was confirmed by the recovery of the patient under the use of the iodide.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Dr. Szalárdi, Budapest.—No medical men so acting would be knowingly admitted into any of the medical societies of this country; nor would they, if already members, be allowed to retain their membership.

Lex.—There are two medical officers at Parkhurst, receiving, respectively, £350 and £160 per annum.

A Fellow.—At the annual election in July next. The total number of Fellows of the College by *examination* is 549.

The Parkes Museum of Hygiene.—The Drapers' Company has voted a donation of fifty guineas to this institution.

A Provincial Teacher.—The clinical cases on which candidates are examined for the diploma of membership of the College of Surgeons are selected from the metropolitan hospitals, and good cases occasionally from dispensaries.

Mountaineer.—Yes; the Alpine Club has contributed considerably to scientific meteorological reports. It has assisted in establishing over fifty stations in the Peninsula, and the Roman section of the Club is about to establish a meteorological station at Guadagnolo, the highest peak on the Sabine Hills. The priest of the small hamlet on the summit is to be entrusted with the observations to be made.

M.R.C.S. and Dr. W.—The time has expired for sending in essays for either of the subjects mentioned by you respectively. The Jacksonian Prize subject for the present year is "The History, Principles, Practice, and Results of Antiseptic Surgery."

A Martyr: Anti-Vaccination.—A well-known anti-vaccination lecturer has been fined by the magistrate at the Aston Police-court the maximum penalty of 20s. or a month's imprisonment for refusing to have his child vaccinated. He admitted the offence, adding that he never meant to have his child vaccinated. He declined to pay the fine, and was removed to the cells.

The Law Vindicated.—A firm of butchers at Derby were charged with assaulting the Assistant Sanitary Inspector for the borough whilst in the execution of his duty in assisting to examine the meat on the defendants' premises, when three carcases of sheep were condemned. A long list of previous convictions was proved against the defendants, and the sentence in the present case was imprisonment for two months with hard labour, without the option of a fine.

J. Luke D.—The establishment of provident dispensaries was intended to be a practical remedy for the abuse of free medical relief. Many such institutions have been formed, and are in successful operation in both town and country. We believe it is too true that many of the working-classes regard the workhouse as the proper refuge for their indigent parents when old and decrepit. There is an association having for its object the repeal of the "unjust law" which requires children to support their parents.

A Difference of Opinion.—Dr. Holder, Medical Officer of the Sanitary Committee of the Corporation of Hull, reports that within the previous fortnight more than twenty deaths had occurred from measles, an increase of eight on the last return. He recommended that the schools remain closed beyond the time fixed. Dr. Gibson was of opinion that the danger was quite as great from children playing together in the streets as it was in meeting together in the schools. The Committee did not advise a longer closing of the schools.

Ethnologist.—The founder of the collection bearing his name, Mr. Joseph Barnard Davis, F.R.S., was admitted a Licentiate of the Society of Apothecaries so long ago as 1823, M.R.C.S. Eng. 1843, M.D. St. And. 1862. He is in the practice of his profession at Shelton, Staffordshire. Professor Flower is at present with him, making arrangements for the removal of the collection to the Hunterian Museum. Doubtless some portion of it will be on view at the annual exhibition in July next, when the Fellows meet for the elections into the Council.

The Itinerant Milk-seller again: Brighton.—A prosecution for selling adulterated milk failed under rather singular circumstances before the Brighton magistrates last week. The public analyst proved the milk to be deficient to the extent of 65 per cent. of butter-fat through being skimmed, whilst it contained 40 per cent. of added water. The defendant pleaded that he had a printed notice affixed to his cans: "This is a mixture of milk and water, and sold as such, and guaranteed to be of a better quality than much sold in Brighton." He therefore claimed to be under the "exceptionable clause" of Section 8 of the Act. The purchase by the inspector took place at a barrow in the street, who swore that no such placard was to be seen, but admitted that it might have been on the opposite side of the can. The milk, or rather mixture, was sold at half the usual price. The Bench thought the Act had been complied with, and dismissed the case, suggesting that the "notices" should be put on each side of the cans.

A Sensible Recommendation.—It is to be hoped that the recommendation of the coroner's jury, which was appended to their verdict in the following case—viz., that every police-station should have its ambulance—will be attended to. The inquiry was held on the body of a cabman, who, while loading his cab with a heavy box, overbalanced himself and fell on his head. He was insensible for some time, and was then put into the cab, accompanied by a policeman, and taken to the Middlesex Hospital. On the way thither he dropped off the seat, and the policeman being unable to get him up, he remained on the floor, but on arriving at the hospital he was found to be dead. The medical evidence was to the effect that the mode of the conveyance had accelerated, if it had not caused, his death. Questions were asked why an ambulance had not been got, but from the policeman's replies it appeared there was none to be had. There was one at Vine-street, but none at Marlborough-street, nor, as far as he knew, at Marylebone-lane.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Centralblatt für die Medicinischen Wissenschaften—Gazette Hebdomadaire—Louisville Medical News—Nature—Revue Médicale—El Siglo Medico—Boston Medical and Surgical Journal—Medical Enquirer—Rivista de Medicina—Dublin Journal of Medical Science—Family Physician—Detroit Lancet—Practitioner—Cape Argus—Cape Times—American Practitioner—Leisure Hour—Sunday at Home—Girl's Own Paper—Boy's Own Paper—Annals of the Anatomical and Surgical Society—Archives of Dermatology—Journal of the Society of Arts.

COMMUNICATIONS have been received from—

Professor Spence, Edinburgh; Dr. Wolfe, Glasgow; Dr. Headlam Greenhow, London; The Secretary of the Royal Polytechnic Institution; Mr. Rushton Parker, Liverpool; Mr. Shirley F. Murphy, London; The Secretary of the Society for the Relief of Widows and Orphans of Medical Men; Dr. Stephen Mackenzie, London; Mr. John Bellamy, London; Messrs. Baillière, Tindall, and Cox, London; Dr. Matthews Duncan, London; Mr. Lionel Druitt, London; The Hon. Secretaries of the Medical Society of London; Mr. J. Chatto, London; The Hon. Secretaries of the Harveian Society of London; The Secretary of the Royal Institution; Mr. T. M. Stone, London; The Secretary of the Pathological Society; Messrs. S. M. Burroughs and Co., London; Dr. F. Pavy, London; The Secretary of the Provident Surgical Appliances Society; The Hon. Secretary of the Obstetrical Society of London; Dr. Robert Perry, Glasgow; The Registrar of Apothecaries' Hall, London; The Registrar-General, Edinburgh; Mr. S. M. Bradley, Manchester; Dr. Robert Druitt, London; Dr. Edward Seaton, Nottingham; Sir Joseph Fayrer, London; Mr. Jonathan Hutchinson, London; The President of the Liverpool Medical Institution.

BOOKS AND PAMPHLETS RECEIVED—

A Note-Book of Solubilities, by John Eagle—After Care, by the Rev. H. Hawkins—Manchester Association for Controlling the Escape of Noxious Vapours, etc., Report for the Year 1879—Sehstörungen bei Vergiftungen durch Wildpastete und Hecht, von Prof. Dr. Hermann Cohn—Irish Medical Directory, 1880—Headaches, by W. H. Day, M.D.—Movable Atlases of the Human Body, by Dr. Witkowski—The Throat and the Mechanism of Voice, etc., text by Mr. Lennox Browne, F.R.C.S.—The Female Organs of Generation, text by Dr. Palfrey—The Eye and the Mechanism of Vision, text by Mr. Hy. Power, M.B., F.R.C.S.

APPOINTMENTS FOR THE WEEK.

January 31. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

Royal Institution, 3 p.m. Prof. T. Rupert Jones, "Coal."

February 2. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Royal Institution, 5 p.m. General Monthly Meeting.

Medical Society of London, 8½ p.m. Third Lettsomian Lecture—Mr. W. F. Teevan, "On Stone in the Bladder."

3. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Pathological Society, 8½ p.m. The President—Specimens and Casts Illustrating Joint Disease in Locomotor Ataxia. Dr. Buzzard—Cases of Locomotor Ataxia, with Osseous and Articular Lesions (living specimens). Mr. Morgan—Specimen of Diseased Bone. Dr. Goodhart—Congenital Occlusion of the Duodenum; Gangrene of the Colon. Dr. Dreschfeld (Manchester)—Tumours from Abdomen. Mr. Hulke—Drawings of Cancer. Mr. James Startin—Drawings of Skin Diseases: Psoriasis and Acute Pemphigus. Dr. Gilbart Smith—Epithelioma of Pharynx. Dr. F. Simon—1. Congenital Syphilis of the Larynx; 2. Endolaryngeal Epithelioma. Mr. Nunn—1. Secondary Tumour after Removal of Breast; 2. Epithelioma of Penis; 3. Melanosis of Finger. Mr. Nettleship—Optic Neuritis. Dr. W. Ewart—1. Disease of Suprarenal Capsules; 2. Miliary Tubercle of Bladder.

Royal Institution, 3 p.m. Prof. Schäfer, "Physiology of Muscle."

4. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Lister), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.

Epidemiological Society (University College), 8 p.m. Dr. Squire will exhibit Microphotographs, by Dr. Sternberg, of the Blood in Yellow Fever. Surgeon-General Dr. Joseph Ewart will read a paper entitled "Enteric Fever in India; with some Observations on its Probable Etiology in that Country."

Obstetrical Society, 8 p.m. Annual Meeting. Election of Officers; Changes in By-laws; the President's Address. Specimens: Dr. Heywood Smith—New Instruments. Dr. Herman—Moles and Fibroid Tumour of Vagina.

5. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m., Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

Harveian Society, 8½ p.m. Mr. Osman Vincent, "Congenital Talipes in the Adult." Mr. Walter Pye, "The Present Position of the Operation of Nerve-Stretching."

Royal Institution, 3 p.m. Prof. Dewar, "Recent Chemical Progress."

6. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

Royal Institution, 9 p.m. Dr. Huggins, "Photographic Spectra of Stars."

VITAL STATISTICS OF LONDON.

Week ending Saturday, January 24, 1880.

BIRTHS.

Births of Boys, 1340; Girls, 1304; Total, 2644.
Average of 10 corresponding years 1870-79, 2682·0.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	931	969	1900
Average of the ten years 1870-79, corrected to increased population	886·8	874·4	1761·2
Deaths of people aged 80 and upwards ...	...	...	80

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa
West	561359	1	3	10	3	17	...	2	...	3
North ...	751729	1	3	16	1	30	...	1	...	1
Central ...	334369	...	6	5	3	9	...	1	...	2
East	639111	...	4	16	2	23	1	...	...	1
South	967692	1	14	36	4	61	1	4	1	7
Total	3254260	3	30	83	13	140	2	8	1	14

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	30·249 in.
Mean temperature	29·7°
Highest point of thermometer	37·8°
Lowest point of thermometer	17·6°
Mean dew-point temperature	23·3°
General direction of wind	Variable.
Whole amount of rain in the week	0·01 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, Jan. 24, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1880.*	Persons to an Acre. (1880.)	Births Registered during the week ending Jan. 24.	Deaths Registered during the week ending Jan. 24.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In centimetres.
London	3664149	48·6	2644	1900	37·8	17·6	29·7	−1·28	0·01	0·03
Brighton	107321	45·6	70	43	39·0	20·4	30·3	−0·95	0·00	0·00
Portsmouth ...	134224	29·9	103	60	...	...	...	...	...	...
Norwich	85827	11·5	54	38	...	...	...	...	...	...
Plymouth	74993	53·8	41	39	42·5	28·5	34·2	1·22	0·09	0·23
Bristol	213536	48·0	130	97	37·3	17·5	28·8	−1·78	0·00	0·00
Wolverhampton ...	75970	22·4	54	32	36·3	16·2	27·7	−2·39	0·00	0·00
Birmingham ...	394738	47·0	303	190	...	...	...	...	...	...
Leicester	129912	40·6	81	57	...	...	...	...	...	...
Nottingham ...	173827	17·4	124	101	41·6	15·5	29·9	−1·17	0·03	0·08
Liverpool	544056	104·4	414	295	...	...	...	...	...	...
Manchester ...	363130	84·6	248	214	...	...	...	...	...	...
Salford	185786	35·9	148	85	...	...	...	...	...	...
Oldham	115413	24·7	66	42	...	...	...	...	...	...
Bradford	197196	27·3	123	88	49·0	20·8	31·6	−0·22	0·05	0·13
Leeds	318929	14·8	225	144	42·0	24·0	33·6	0·90	0·02	0·05
Sheffield	304938	15·5	196	126	39·0	21·0	32·6	0·34	0·00	0·00
Hull	149627	41·2	89	82	41·0	23·0	31·5	−0·28	0·07	0·18
Sunderland ...	116730	42·2	68	43	43·0	28·0	34·9	1·61	0·09	0·23
Newcastle-on-Tyne	149366	27·8	109	65	...	...	...	...	...	...
Edinburgh	229839	54·8	159	93	39·0	23·0	31·7	−0·17	0·00	0·00
Glasgow	589598	97·7	385	293	39·3	26·5	33·1	0·62	0·03	0·08
Dublin	314666	31·3	204	243	41·7	13·5	29·9	−1·17	0·05	0·15
Total of 23 Towns in United Kingdom	8633571	39·2	6038	4370	42·5	13·5	31·4	−0·34	0·03	0·08

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 30·25 in. The lowest reading was 29·82 in. on Sunday morning, and the highest 30·47 in. on Wednesday morning.

* The figures for the English and Scottish towns (except for Nottingham, Salford, and Oldham) are the numbers enumerated in April, 1871, raised to the middle of 1880 by the addition of nine years and a quarter's increase, calculated at the rate which prevailed between 1861 and 1871. Revised estimates have been adopted for Nottingham, Salford, and Oldham, based upon special returns of inhabited houses existing within those boroughs. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE
ON INTRA-UTERINE TUMOURS.

By J. MATTHEWS DUNCAN, M.D., LL.D.,
Physician-Accoucheur and Lecturer on Midwifery at St. Bartholomew's Hospital.

I PROPOSE to-day to say nothing of malignant growths, and I prefer to discuss my present subject under the title of "intra-uterine tumours" rather than "intra-uterine polypi," which latter would be the natural or ordinarily-used designation of the subject of this lecture. In describing polypi and tumours two things are confused—the origin and the situation of the polypus or tumour; and, like all confusions, this one leads to a great deal of harm. A tumour is best named with reference to its origin. To-day we are considering only tumours which are intra-uterine in their origin; which spring from the cavity of the body of the uterus, and which remain there. An intra-uterine polypus may be, in point of situation, vulvar—the polypus hanging in the vulva; that is, between the labia. A polypus intra-uterine in origin is, in the majority of cases, a vaginal polypus in situation; or, again, a polypus which grows from the interior of the body of the uterus may be intra-cervical in situation. And when you hear of intra-uterine polypi, or look at pictures or diagrams of them, what is generally meant is intra-cervical. A fibroid or a mucous membrane growth, if truly intra-uterine in situation, is very rarely a polypus. Except in the case of little mucous intra-uterine polypi, I have never seen an intra-uterine growth which was really a polypus.

An intra-uterine growth, not intra-cervical, is either sessile or has only a neck; it has no distinct stalk to make it a polypus. You may easily perceive that, within the womb proper, there is no room for the development of a stalk to a polypus which is of any considerable dimensions. You must understand, then, that intra-cervical polypi are generally called intra-uterine, and wrongly so; moreover, they are easily diagnosed and managed, compared with truly intra-uterine growths, which are rarely, if ever, polypi, and have only a neck, not a stalk.

You see I do not attempt to make a new nomenclature: that is an easy proceeding, which is rarely advantageous, and still more rarely successful: but I give a designation to growths which are truly within the cavity of the body of the uterus, calling them intra-uterine tumours, not intra-uterine polypi, from their origin and situation combined; and it is only of such truly intra-uterine tumours that I intend to speak to-day.

You will understand the rationality of calling a tumour or a polypus according to its site of origin, and using other terms to denote the situation in which the body of the growth happens to lie, if you think of polypi of the nose. These frequently hang down into the pharynx, and they are not called pharyngeal, but nasal polypi; and we are only carrying out the same rule of nomenclature.

To recapitulate, truly intra-uterine polypus does not exist, or is never seen except in the case of a small mucous polypus, such as I show you in this preparation, for there is no room for a stalk to develope to a tumour which attains even a moderate size. The most common uterine tumours are fibroids, and these may be vulvar, vaginal, or intra-cervical polypi, or intra-uterine, or submucous, or embedded, or subperitoneal tumours.

What I have already said indicates that a growth from the interior of the uterus almost invariably grows downwards. It begins within the cavity of the body of the uterus, and as it progresses it becomes, under the influences of growth and uterine contractions, intra-cervical, and then it becomes vaginal, and it may even become vulvar in situation. But this is not invariably the case: a polypus may grow up instead of down; and to prove this I pass round a preparation in which you will observe an intra-uterine growth, almost the size of a small walnut, attached by a neck to the lower part of the cavity of the body of the uterus, and it is growing upwards into the cavity of the body, instead of downwards into the cavity of the cervix. Perhaps, if that woman had lived, and we had had a further history of that growth, we might have found that it ultimately descended, following the usual order of things.

One more word before I come to intra-uterine tumours. What are the polypi, intra-uterine in origin, but in situation intra-cervical? They may be polypi of the mucous membrane. Fibrinous polypi are characteristically intra-cervical, though not invariably so. Placental polypi are occasionally intra-cervical, but not generally. Then, there is a rare condition called cervical pregnancy, in which a mole or an otherwise healthy ovum has been pushed, in the process of abortion, out of the cavity of the body of the uterus, its original and natural site, into the cavity of the cervix, but still retaining its connexions with the mucous membrane lining the body of the uterus. Lastly, you have fibroids, either as true polypi, or as spurious or false—that is, partially enucleated.

Now, what are the varieties of intra-uterine tumour? You have three forms of mucous polypi which occur in this situation: firstly, adenomatous, that is, consisting of hypertrophied glandular structures of the uterine mucous membrane; secondly, molluscum, that is, hypertrophy of the areolar tissue without glandular developments; and thirdly, cystic tumours, where the disease is probably the accumulation of fluid within closed glands of the mucous membrane. This cystic degeneration sometimes accompanies or forms an addition to an intra-uterine fibroid. When I do not mention any particular kind of growth in my lecture to-day you will understand me as speaking of an intra-uterine fibroid. Besides an intra-uterine fibroid you may have a fibrinous polypus within the body of the uterus, or a placental mass—of which latter I have narrated examples in a former lecture. When you have an intra-uterine fibroid it is, as I have already said, a sessile growth, or one which has merely a neck, not a distinct stalk; it is, therefore, not a polypus. It may be a true intra-uterine growth, covered with mucous membrane or with a capsule of muscular tissue in addition; or it may be a spurious or false intra-uterine growth, having no covering, having been to some extent spontaneously enucleated; such a one was at first embedded in the wall of the uterus, and has been expelled, through an opening made in the mucous membrane and muscular tissue, into the uterine cavity, where it may be found as an intra-uterine tumour.

What now are the events which may arise in the history of an intra-uterine fibroid? It may, as in a case I shall presently narrate to you, cause a woman to bleed till she is nearly at the point of death, and indeed, as I have repeatedly seen, it may prove fatal; or, again, it may give no trouble at all, being found only after death,—not so much as suspected before. It may be pushed down into the cervix; or farther, into the vagina; and perhaps even into the vulva: during which process a stalk is formed, which it did not before possess. It was not a polypus so long as it remained in its place of origin, but when it reached the cervix it became one, whether of the false or true variety; that is, whether still encapsuled or partially enucleated. It may be in the course of this pushing down that it becomes enucleated, or it may be enucleated in its earliest original site, so as to have no covering and lie bare ready to be detached. It may even become completely enucleated; that is, enucleated and detached. Another result still may happen, and is well illustrated by a case which was in "Martha" not long ago. The uterus seizes the intra-uterine tumour as it seizes a mole or a child, and pushes it out; but in the course of this process a stalk is not formed: the tumour pulls the probably thin, and therefore weak, uterine attachment with it; and consequently you see the woman with an inverted uterus. It is not a polypus which produces this effect; it is a sessile or necked tumour, which refuses, metaphorically speaking, to form a stalk, pulls the womb down, and turns it inside out.

These processes illustrate the polarity of the uterus, of which I spoke in a former lecture. In order that all this may happen you must have an inhibition of the lowest part of the uterine body while the upper segments are working. During the growth of the intra-uterine tumour you had an opposite condition; the lower segment of the uterus was closed and the upper segment expanded. Then comes the polarity change, and the tumour is pushed into the cervix and onwards, forming a stalk, or bringing the inverted organ with it; and all this happens generally with pains and bleeding.

Here is the proper place to tell you an important fact which will enable you to avoid what may be a distressing and serious error. In the course of such a history as we have been describing it may happen that the tumour comes down and again retires. If you examine the woman at one time, most likely while she is losing blood, a tumour will be found in her vagina; but when you return, perhaps intending to operate, there is no tumour to be found—it has gone up again. This occurs not only in the case of polypi and of tumours which are clearly and distinctly within the cavity of the uterus, but also in the case of some which are intramural or embedded in the uterine wall, and are undergoing a process of enucleation and expulsion. I shall endeavour to impress this upon you by the history of a case which came under my own observation some years ago. It was a case of a large tumour in the vagina, which had several times threatened sudden death from loss of blood at the monthly periods, the amount lost being enormous. On examination, I found no tumour at all in the vagina; but there was evidence that the woman had a uterine fibroid, not a polypus. I wrote to my friend, who had sent her to me, and found what furnished an explanation of the difficulty. It was that he had examined her during the loss of blood; and it was only necessary for me to wait a few days till it recommenced; and then there was a great fibroid, partially enucleated, down in the vagina, with tremendous flooding. That was not an intra-uterine tumour, according to the principle I have adopted of naming tumours according to their origin, but it was an embedded tumour in the course of spontaneous cure by enucleation.

An important point I must now mention: it is that, for reasons which I cannot divine, you have two distinct sets of cases—one, in which the cavity of the uterus is open and expanded; and another, in which no enlargement has taken place beyond what is required to contain the tumour. You will understand that the former are much more easily dealt with as to diagnosis and treatment than are the latter, where you have to force your way every step you make. In the former class of cases you have only to open the neck of the womb, and you can feel all the uterine cavity; while in the other class you have to force your way every fraction of an inch you progress in making the diagnosis.

All the tumours I have been discussing in this lecture are diagnosed and treated very much in the same way. I have said that an intra-cervical tumour is generally spoken of as intra-uterine; it is easily diagnosed and treated: but it is quite a different matter when we come to intra-uterine tumours proper, and we have had several examples in "Martha" of the difficulties attending their diagnosis and treatment.

Suspicion, which does not reach the length of diagnosis, arises when you find an enlarged uterus, especially if it be also a little deformed; but if the uterus be much deformed it is probable that the tumour is not intra-uterine. If the tumour is small you may have no evidence of enlargement even. Suspicion is first aroused in most cases by the occurrence of loss of blood, which may take place at the monthly periods, or altogether apart from them. This loss of blood it is which, in most cases, impels you to examine, per vaginam, in order to treat satisfactorily; for, without a complete diagnosis, treatment is very unsatisfactory. In some cases the intra-uterine tumour produces, in addition to loss of blood, copious serous discharge, or sometimes purulent discharge. I have seen several cases of intra-uterine fibroid in women, after the menopause, where the discharge was not bloody, but evidently from an inflamed uterine cavity, and so profuse as to have effects upon the constitution very nearly as powerful as loss of blood.

How are you to make sure of the presence of an intra-uterine tumour? First, you are not to attempt to make sure unless you have sufficient reason; for the process of making sure is itself attended with considerable danger—the danger of septicæmia from the injuries the process may cause; the danger of parametritis or perimetritis; which must always enter into our consideration. Let us suppose, however, that the case is serious enough to demand that you proceed. You must get your finger into the inside of the woman's uterus to feel it. Examination by the probe is often spoken of, but it is utterly unsatisfactory: there is only one sort of probing that is conclusive for this kind of diagnosis, and that is with the living, educated finger; the other hand aiding by acting in the bimanual method. This is especially successful in cases where the cavity of the body of the uterus is dilated: then, you may be able to insert your finger without further ado, without previous artificial dilatation; or you may, by the exercise of a little force, push the finger through the external and internal orifices; or, again, you may succeed by pressure, while the neck of the womb is held in a vulsella, to prevent its receding before your finger, or to pull it down on your finger. Some of you may remember that in "Martha" very lately we examined and diagnosed a case in this way. But generally, and invariably in that class of cases where there is no dilatation of the cavity, you have to dilate every particle of the neck and cavity which you wish to explore. Now, dilatation for the purpose of exploration of the cavity of the body of the uterus, when the cavity is not previously enlarged, is a much more difficult matter than is generally supposed, often only imperfectly done. You can push in your dilating apparatus, and keep it in by plugging the vagina, which will dilate only as far as the tent goes; and it is a very natural matter to be deceived, and think you have reached the fundus uteri when you have accomplished no such thing. I have often known this happen; it did so in "Martha" not long ago. We thought we had sufficiently (not completely) examined a woman's uterus; and it was only under the influence and urgency of her extreme danger from bleeding that we did so again, more thoroughly, and we found a little intra-uterine tumour, which we removed, with the best results.

The best method of dilatation is by means of tangle tents. Sponge tents are often used; I prefer the tangle, meantime at least. You must have a tangle tent at least three inches long; because, as actually happened in a case which I mentioned in a former lecture, where there was a little intra-uterine mucous polypus in an expanded uterus, the tangle tent may slip right into the uterus and become lost there, owing to its being too short. A uterus which is much hypertrophied may require even a longer tent than one of three inches to open it thoroughly.

Let us suppose that you have completed the dilatation; you have next to introduce your finger into the cavity so as to touch the fundus, and for this purpose you will probably require to hold or pull down the cervix with a vulsella, upon your finger, in the same way as you pull a glove on a finger. In one case, which I read to you in a former lecture, we could not, in this way, arrive at a diagnosis, because the finger was not long enough to reach a mucous polypus, which was discovered only after the death of the patient, that took place from another disease altogether. In that case the cervix uteri was pulled down upon the finger as far as was possible, and yet the polypus was not reached. The uterus from os tincæ to fundus was four inches and a half long. Had it been a matter of extreme urgency to complete the diagnosis, the only way open to us would have been to push the fundus uteri down upon the finger from above, as in bimanual examination. In this manner I might have managed a case in which it was of importance to complete the examination. This method was not successful in the case just referred to. It was tried.

It is quite easy to understand this difficulty when you are looking for a small mucous polypus high up in a womb which is occupied by a fibrous tumour. Polypi of this kind, growing in spaces left uncompressed by a fibrous tumour, are not rare, and I have seen great good result from their removal; but in many such cases it is mechanically impossible by any known means to reach the polypus so as to diagnose or treat it.

I now come to speak of the treatment, and I recommend you to trust in "avulsion." Do not first separate the tumour and then take it off, but use avulsion, doing the two parts of the operation simultaneously. In the great majority of cases nothing else is required. You seize the little tumour, as many of you have seen me repeatedly do in "Martha," with a vulsella, and with a slight amount of rotation pull it out: it is, if a fibroid, enucleated by the violence. Of course, if it is a fibroid and already partially enucleated, it comes away with no difficulty; but even if it is covered by a thin capsule, by seizing it you can get it away without much trouble. If you should require any cutting, I recommend you to use a pair of curved scissors, though this is very seldom necessary in the case of a fibroid. In the case of a soft mucous tumour which is not a polypus the process of removal resolves itself, involuntarily on your part, into one of torsion and pulling away You seize the tumour with a

pair of uterine dressing forceps, and pull it off just as you would pull off a nasal polypus. In both sets of cases the process is essentially one of avulsion. In the case of adherent placental masses you peel off with your nail or with the tip of your finger.

I have treated a large number of these cases, but have never resorted to any means other than those above mentioned. Were I to do so I should throw a wire round the neck of the tumour and burn it off with a galvano-caustic apparatus. I have no particular objection to the écraseur, but I think the other is the nicer operation, and by it you have security against bleeding if you do not cut off the growth too quickly.

I shall now read to you a case in which the practice I have been describing was successfully followed. The case was a very alarming one, but very easily cured.

L. J., aged thirty-three, admitted February 16, 1878. Married for thirteen years; has four children, the last born three years ago; has had two miscarriages, the last four years ago. Catamenia began between eleven and twelve, always regular every three weeks; loss copious, with clots and hypogastric pain. Has had flooding, with clots, for eighteen months till nine days ago. Has been treated for retroversion, wearing a Hodge pessary, which was removed covered with fœtid discharge. Hypogastric examination reveals nothing abnormal. Uterus is retroflected and retroverted. Cervix enlarged, bluish, discharging opaque mucopus; posterior lip abraded and having several Nabothian follicles. Uterus not freely mobile, not tender. Cavity measures three inches and a half. During a short stay in the hospital she had considerable improvement, apparently from lying in bed. Re-admitted on May 15, with continued loss of blood; very anæmic, the skin of a lemon or golden tint. The cervix was on the 22nd dilated with tangle tent. On the 23rd a larger and longer tent was introduced, and on the following day examination by finger discovered a dilated uterine cavity containing a blood-clot. On the 25th, under ether, the uterus was drawn down by vulsella, a growth on fundus as big as a large hazel-nut seized by vulsella, and torn away slowly with rotatory movement. It proved to be a fibroid, and had been enucleated in the operation, for its surface was everywhere fresh and none of the capsule came away. After this operation discharge ceased; the woman rapidly regained her looks, and left the hospital quite well seventeen days after the tumour was removed.

You may ask what becomes of the capsule in such cases. In this case I don't know what became of it, and I don't, in practice, care, for the woman was cured; but I think that in other cases it is prudent to remove by scissors portions of capsule which are large and pendulous; and I have repeatedly done it.

Formerly, the treatment was to ligature the neck of the tumour, and gradually to tighten, strangle, and separate it, all for fear of bleeding, which was expected from quick severing of the connexions of uterus and tumour. This preparation, which I hand round, is of itself evidence that the process was sometimes a fatal one, for here you have a sloughing ligatured intra-cervical polypus still attached to the uterine fundus. Nowadays, this process is never used. I have never made use of it in any shape; but I was taught it, and have seen it resorted to.

Bleeding is, for the most part, a mere bugbear; for nearly in every case there is none. It is chiefly in the case of mucous membrane growths that there is danger of hæmorrhage, which may probably be diminished, however, by giving ergot before the operation. If it should occur it may be stopped by a plug, which is a most valuable means of arresting hæmorrhage. This process of plugging you must see for yourselves, for it does not so well admit of description as to entice me to go on to give you an account of it in the present lecture.

You may cut through the body of a fibroid, and leave a bit in the uterus, without necessarily having important hæmorrhage. But this is an undesirable proceeding. At present we have a case in "Martha" where, after two years and a half, the stem of a fibroid partially amputated by one of my predecessors, is still to be seen, dirty and greyish-black, and discharging a brown fluid, but otherwise giving no annoyance. The only case nearly resembling those under discussion, where we have had serious bleeding, was where the tumour was a muscular outgrowth, not a fibroid; it was attached high in the cervix; there was no neck. We cut through the tumour, and the woman bled severely; but a plug was efficient in arresting the hæmorrhage even in that case. This kind of tumour has no capsule like a fibroid. It is a continuous outgrowth of the proper uterine tissue.

All that I have said to-day has reference to a very important class of tumours which I have carefully differentiated from polypi, intra-cervical or vaginal. But, on the other side, I have not been so careful to discriminate those tumours from sub-mucous fibroids.

These bring us to a department of uterine surgery which is only being developed at present. Many sub-mucous fibroids, which are more or less deeply embedded in the uterine walls, are yet amenable to the same kind of treatment as I have been describing as applicable to those which are intra-uterine.

ORIGINAL COMMUNICATIONS.

PRACTICAL NOTES ON THE ORDINARY DISEASES OF INDIA,

ESPECIALLY THOSE PREVALENT IN BENGAL.

By Dr. CHEVERS.

INDIAN RELAPSING FEVER.(a)

(*Continued from page* 117.)

As we have already seen, the Relapsing Fever of India is distinguished from the European disease in being attended with great mortality. The fever at Agra killed 406 prisoners in 1860, and 250 in 1864. The opponents of the view held by Lyall, Ewart, Gray, Bateson, and Smith insist strongly upon this point, and also deny that famine had anything to do with the causation of this disease in the Indian jails. These arguments are met by the facts that, although it is not a matter of necessity that an Indian famine should be attended with Relapsing Fever—the last famine of 1876-77 in the Madras Presidency had not this aggravation—the Relapsing Fever of India always originates either among the poor or the prisoners, and that, at least in the Punjab, the Lieutenant-Governor, Dr. Dallas, the Inspector-General of Jails, and Dr. Gray so fully concurred in the belief that the appearance of this fever was clear evidence of a bad Hygienic condition of the jails, that orders were given making great improvement in the diet, lodging, and clothing of the prisoners.

It can hardly be expected that men who examine this fever from a scientific point of view, by the light of Indian experience, will be shaken by the personal and political arguments that this is not Relapsing Fever because it devastates certain districts in which famine has not recently occurred, or destroys 25 per cent. of the prisoners in several central jails under the eye of a humane government and of officers whose administration has been reduced to a system which is nearly perfect. I have already argued (page 395 of vol. i. for 1879) that the poor of India are the descendants of many generations of starvelings, and that they are, by reason of the deficiency of nutritive elements in their food, subject to the life-long misery of chronic famine. Of these poor the majority of the jail population are the most singularly unhappy representatives. The axiom, generally applied to the European criminal, that he represents the worst blood, the largest sum of constitutional disease, and the lowest feeding, clothing, and lodging discoverable in his city, is equally true of the ordinary Indian prisoner whom destitution frequently precipitates into crime. Again, although it may have long been true that the food allowed in an Indian jail is somewhat better and more ample than that obtainable by the very poorest free inhabitants of the district, its power of maintaining health under the amount of labour exacted is not always unquestionable. There still, again, remains the very serious question—do the prisoners actually obtain the authorised allowance? In reply to this I may give one or two facts which were painfully forced upon my notice during twenty-six months in which I officiated as Inspector-General of the fifty-two jails in Bengal. I may premise that, at my first large civil station, Chittagong, I once arrested the attendants as they were

(a) Read at the Epidemiological Society, January 7, 1880.

carrying out of the front-door of the jail, in broad daylight, close past the lodge where the darogah (native jailor) usually sat, a huge basket of hot rice. When I reported this occurrence to the magistrate he appears to have held some inquiry, the result of which was that it was intimated to me that he had ascertained that the prisoners were accustomed to send what remained from their meals for the support of a favourite Brahmany bull which infested the neighbourhood of the jail. To this I felt constrained to reply that the quantity of rice which I had seen was, self-evidently, in excess of the gastric capacity of any Brahmany bull, however voracious; that the grain was not leavings, but perfectly white rice fresh from the cooking vessels; and, further, that my acquaintance with the physiology of the Brahmany bull taught me that, however capable that sacred animal might be of eating an immoderate allowance of simple rice, it was difficult to see to what dietetic use, he being a strict vegetarian and quite above all suspicion of addiction to stimulants, would apply that large allowance of marsalla—composed of dhall, oil, strong spices, and capsicum—which I saw lying upon the heap of snowy rice. Further, that a very large majority of the prisoners were Mussulmans, who care nothing whatever for the Brahmany bull save when he appears before them in the form of appetising *kiwabs*. Many years afterwards, when I held temporary charge of the prisons, the superintendent of the Alipore Jail reported that a large batch of convicts had arrived from Midnapore in a starving condition. I immediately wrote to Midnapore, which is about a night's post-journey from Calcutta. On its way, my letter was crossed by one from the very able joint magistrate, informing me that his jailor—one of our pattern jailors—had been detected in robbing the prisoners daily of large basketfuls of cooked rice. Soon after this I sent a circular to magistrates, requesting that, at a certain hour on a certain day, they would test all weights used in weighing food in the fifty-two jails of Bengal, by having them weighed against rupees in their presence. The result was that scarcely a single weight came up to the just standard, the weights of the pattern jails being generally most deficient: "The scales were out of gear," "The weights were worn," etc., etc.! Until you can fill your jails with perfectly healthy, well-nourished felons, and can provide that they shall not be over-tasked and underfed, you may not in reason presume to maintain that, when a contagious fever appears and kills off 25 per cent. of your prisoners, it cannot possibly be of the nature of Relapsing or Famine Fever.

To continue the history of Relapsing Fever. In April, 1877, Mr. Blayney, a medical practitioner and a member of the Town Council of Bombay, stated that a fever which had appeared among those lodged in the relief camp on the Flats was not the ordinary malarious (marsh remittent) fever, but was "a contagious epidemic disease—a Relapsing Fever." The Government immediately desired Surgeon-General Hunter, the head of the Medical Department, to institute inquiry into this fever. Dr. Hunter appointed Dr. Hewlett, the Acting Sanitary Commissioner, and Dr. H. Vandyke Carter to this duty. The report of the Committee and Dr. Hunter's report appeared in the *Indian Medical Gazette* for October 1, 1877. The Committee's report appears to have been somewhat premature and to have been founded upon insufficient data and observation, but it contained the important announcement that Dr. Carter had discovered in the blood of these fever patients the *spirillum* already recognised as characteristic of the Relapsing Fever of Europe. Dr. Hunter's opinion was opposed to that of the Committee, he maintaining that evidence was wanting to prove that the disease was Relapsing Fever. An important report of the whole investigation has been given by Dr. H. Vandyke Carter.(b) Dr. Carter's report is so recent and may be so readily consulted that it will be sufficient to cite a few of its leading statements. He shows that crowds of indigent peasantry, flocking as refugees to Bombay, brought with them not only destitution and overcrowding, but also a contagious fever, which soon spread to the resident population immediately in contact with them, and became the cause of death to many. He regards the disease as Famine or Relapsing Fever. The report is founded upon the examination of about 350 cases of this fever. Quinine had no specific action in this disease. Both at the height and towards the close of the epidemic, Dr. Carter says cases occurred which had all the characters of the so-called "typhus icterodes" or "bilious typhus," in a most pronounced degree. In these cases there was generally "a yellow tinge in the conjunctivæ." "Jaundice was commoner here than it usually is in" [the Relapsing Fever of] "Europe." When at its height, about the seventh or eighth day, the general distress abruptly came to an end with critical sweating and considerable fall of temperature. There occurred from one to four relapses in 50 per cent. of the cases. Abortion in pregnant women occurred in the Bombay fever just as it does in that of Europe. The ravenous appetite, so generally observed in this type of fever, was often noted. The average death-rate was about 10 per cent. of those attacked. A marked characteristic of this fever was the presence of the *spirillum* (Spirochæte Ehr.) in the blood, in immense numbers, "often incalculable except by hundreds of millions," in some cases, rarely in others. They were often so crowded as to offer mechanical impediment to the circulation, evidenced by dusky lividity of the countenance. The parasite was sought for in many cases of remittent fever and ague, but was not found. It was not found in enteric fever (except in one very doubtful instance) or in small-pox, varicella, or symptomatic fevers. Dr. Carter says, "Once indeed I found a minute and active organism in the blood of a patient affected with fever, seemingly intermittent in type; but, in general, I conclude that the spirillum must be regarded as distinctive of one clinical pyrexial form." In the *Lancet* for June 7, 1879, page 814, Dr. Carter announced that the spirillum fever may readily be communicated to the *macacus radiatus*, a common quadrumanous inhabitant of the Bombay forests, by inoculation with the blood of a fever patient, or with that of an infected monkey, with the result of marked general symptoms, and abundance of the attendant blood-parasite. Post-mortem appearances, too, are equally accordant.

As I have already shown, Dr. Lyons, one of the most laborious modern investigators of Indian fevers, Mr. Oldham, and others, absolutely deny the existence of paludal poison. Mr. Oldham, however, believes in the separate existence of that Indian Remittent Fever which most of us characterise as paludal. Dr. Ewart long ago contended that some cases of so-called Paludal Remittent would, upon closer investigation, be found to be true enteric, typhus, or relapsing fever, complicated with, and masked by, the marsh poison. Dr. Lyons has published two elaborate works(c) in exposition of his doctrine that Twining, Morehead, and many others of us have been deceived in believing that there is, or ever has been, such an entity as Paludal Remittent Fever in India, but that all such cases, carefully observed, will prove to be examples of Continued Fever—Enteric, Relapsing, or Typhus. Many of Dr. Lyons's contemporaries will live and die in the conviction that Paludal Remittent, curable by quinine, is prevalent all over India (otherwise why not do away with quinine?); but we must all feel grateful to Dr. Ewart and to him for the manner in which they have illustrated the neccssity of sifting our cases of grave Indian fevers, and of eliminating those of True Enteric and of Relapsing Fever, all of which were, but a few years ago, either entirely confounded with or, according to the sagacity of the practitioner, more or less imperfectly separated from the "Remittents," and were invariably reported and embodied as Remittents in the returns. A careful perusal of the third section of Lyons's Treatise will lead to the conclusion that Relapsing Fever has been far more prevalent in the East than was generally believed. Of this we have many illustrative facts before us. To give one example out of a score:—Dr. John Macpherson has recently informed me that, during the Burmese War in 1852-53, he received communications from Dr. Murphy, who had served in Africa and in the West Indies, insisting that a disease which prevailed in the European force in Burmah was perfectly identical with true Yellow Fever. The reports of the 80th and the 18th Royal Irish Regiments by Messrs. Taylor and Stewart(d) show that, in the first of these regiments, the deaths were 19 to 796 admissions for fever, and that in the second corps they were also 19 to 796 admissions for fever. The icteroid character was well marked. Contagion does not appear to have been suspected.

(b) *Medico-Chirurgical Transactions*, vol. lxi., page 274, "Notes on the Spirillum Fever of Bombay." 1877.

(c) "Typhoid Fever Discriminated from Remittent Fever," etc. (*Indian Annals of Medical Science*, No. xxviii., 1871, page 241), and "A Treatise on Relapsing or Famine Fever," London, 1872.

(d) *Indian Annals of Medical Science*, No. ii., 1854, pages 418 and 431.

It was, some years ago, well remarked that, whenever a fever case in India puts on an icteritious appearance, especially in a jail, we ought to be on our guard against an outbreak of Relapsing Fever. Every such case should be thoroughly sifted and closely watched. True jaundice is not, and has not been, as far as I am aware, a characteristic of the paludal remittent of any Indian locality. It is, of course, needful to distinguish the pallid, dusky greenish or yellowish cachæmic aspect presented by many sufferers from the worst paludal fevers from that seen in true icteroid fever. Some years ago, I treated several of a party of European workmen, most of whom were attacked with serious remittent fever while setting up an iron bridge at Peealee, on the Mutlah Railway, about thirty miles from Calcutta. The aspect of these patients was so characteristic that I, more than once, on entering the ward and glancing along the beds, said, "That is a fresh case of Peealee Fever!" This, however, was not jaundice; it appeared to be due to disintegrative blood-change.

The question, *Does Relapsing Fever occur in the Lower Provinces of Bengal and in Calcutta?* is one which still requires careful investigation, even by those of us who have practised nearly all our lives in that part of the country. There is no positive evidence to show that the disease has appeared, within this century, in any town or jail of the Lower Provinces. The result of my own experience of upwards of twenty-seven years in malarious places is that, when I review the subject, my mind reverts to the case of *one* native who was brought into my ward moribund in fever, with saffron-coloured eyes and sordes about the mouth. Kenneth Mackinnon repeatedly insists that he could never trace any evidences of contagiousness in remittent fevers prevalent in and below the Province of Behar. Dr. Francis Anderson's committee, who carefully investigated the Burdwan Fever in 1864, were convinced that it was not contagious; and this opinion has, I believe, been held by all who have since observed this disease, with the exception of Dr. Lyons. I, however, think that few Calcutta medical men will be able to concur with him in thinking that Burdwan Fever, which he terms "the non-eruptive disease of Bengal," "communicated the eruptive and milder variety" [Dengue] "to the residents of the wealthy and well-cared-for metropolis."(e) My friend Dr. William Palmer has lately informed me that he had large opportunities of studying Relapsing Fever in England, but that, during his long Indian career, a great part of which has been spent in the Calcutta hospitals, he has never seen a case of this disease. Still, the following points appear to claim attention. The fevers with which Calcutta was visited between the time of its first occupation, late in the seventeenth up to the beginning of the present century, were almost unaccountably deadly. We read of 460 burials out of 1200 British inhabitants of Calcutta between August and the ensuing January,(f) and of a detachment of 240 men, chiefly Europeans, stationed at Fultah, on the Hooghly, of whom not thirty were left alive between August and December,(g) Dr. James Lind wrote of the fever which prevailed in Bengal in the year 1762, and which he terms "putrid and remitting marsh fever," as "raging more or less in different places according as the soil was more or less swampy," and as becoming so violent, especially during the rainy season, as to end in death during the third fit, which was generally the case, while others were exposed to the danger of dying at every fit. Admiral Stavorinus, speaking of the fever which prevailed among the European inhabitants of Calcutta between 1766-71, says that "it generally sweeps away those who are attacked by it in the course of three days." Dr. John Clark describes "fever and flux" as being very destructive in Calcutta between 1768 and '71. He states that fever frequently carried off the patient in twelve hours.(h) Assuredly these are not the characters or the death statistics of the Paludal Remittents of the present day! They more resemble those of the Relapsing Fever of 1816, in which it was calculated that, between the middle of January and the end of June, there were 8500 deaths out of a population of about 55,000.(i) The evil sanitary condition of old Calcutta, the prevalence of sea-scurvy in ships' crews, and inappropriate treatment, prejudicial as they undoubtedly were, are inadequate to account for such death-rates as these. We have very little precise information with regard to the type of these Calcutta fevers; but Dr. Lyons notices that Dr. Lind wrote of the deadly Bengal Fever which he observed in 1762, that the "patients are very subject to relapses"; and also that, in Ives's narrative of the sickness of Admiral Watson, who died in Calcutta on the third day of fever in August, 1756 (when the frightful mortality from fever alluded to above was going on in Major Kilpatrick's detachment down the river at Fultah), it is mentioned that "his eyes were a little yellow." Further, that, in the "Selections from the Records of the Calcutta Presidency General Hospital," published by Mr. Alexander Grant in No. IX. of the *Indian Annals of Medical Science*, there are two fatal cases of fever occurring in 1797, in which it is noticed that, late in the disease, "the skin was tinged yellow" in one, and "the skin was considerably yellow" in the other case. I see that both of these patients died on the eighth or ninth day of the fever. Henry Goodeve notices(k) the striking fact that, in the year 1770, *during a scarcity of rice*, nearly 2000 Europeans, besides 80,000 natives, died of fever in Bengal alone. All these points combine in countenancing, to say the least, a strong suspicion that Relapsing or Famine Fever occurred in Lower Bengal until late in last century. With regard to more recent times, Twining says, in 1835:(l) "We every year meet with some patients in whom an intense yellow suffusion of the skin occurs in fevers of considerable severity." When treating of that very grave disease which he termed the "Congestive Fever of the Cold Season," he says,(m) "Intense yellowness of the skin and eyes, with red-coloured urine, are occasional attendants on these cases"; and further on, in speaking of this fever as it occurred in natives, he says, "Jaundice is by no means a rare sequel of the fever of this season." Dr. John Macpherson informs me that, in a pamphlet which he wrote in 1856, he remarked, "Cases do occur in which there is much yellow suffusion with a certain amount of black vomit, and such cases I have seen in Calcutta." In the preface to his Treatise, Dr. Lyons says, "Since the manuscript of his work was transmitted to England in October, 1871, I have personally observed two Epidemics of Relapsing Fever in Bengal." He appears to allude to the epidemic of Dengue; but I think that we must await a fuller exposition of Dr. Lyons's views on this subject before we can attempt to argue the question further. I practised throughout the Dengue Epidemic of 1855, and during the first three months of that of 1871; and, with a clear recollection of most of my numerous cases, I am unable to think that I witnessed anything at all resembling True Relapsing Fever in either of those epidemics.

Treatment.—1. *Prophylaxis.* Removal of troops from impested localities, careful segregation of sick, good food, clothing, ventilation, and general hygiene, quinine and iron in tonic doses. As few prisoners as possible to be kept in jails. A famine was threatened in Behar when I was officiating as Inspector-General of Jails. I recommended to Government that summary punishment should be employed in all minor offences, that the jails might not become overcrowded.

2. *Treatment of the Disease.* The principal indications are to support life beyond the eighth day, and to counteract the tendency to sudden collapse by liquid nourishment, wine, and quinine; and then to watch the patient vigilantly, sustaining his powers and averting all injurious and depressing influences, until danger of relapse is past, and true convalescence is well advanced.

3. To give quinine steadily in moderate doses, first as the TEST of the true nature of the fever; and next, when we are certain that we have Relapsing Fever to deal with, as our most powerful nervine tonic and as an antidote to whatever paludal influence may be present in the system. To watch for and meet cerebral, thoracic, and abdominal complications. To prevent or relieve bowel-irritation, to which there is generally a great tendency, the exciting cause being often improper solid food eaten to appease the great hunger which is usually present late in the attack.

4. To aid the always slow convalescence, by quinine, iron, and proper nourishment, and by change of air.

(*To be continued.*)

(e) Treatise, preface, page vii.
(f) Captain Hamilton, between the years 1688 and 1723.
(g) Ives, in 1756.
(h) Ranald Martin's "Diseases of Tropical Climates," second edition, page 308.
(i) Kenneth Mackinnon.

(k) "Sketch of the Progress of European Medicine," in the *East Calcutta Med. and Phys. Trans.*, vol. viii., part 2.
(l) *Op. cit.*, vol. ii., page 201.
(m) *Ibid.*, page 349.

OBSERVATIONS ON

THREE CASES OF SPASMODIC PARAPLEGIA.

By JAMES RUSSELL, M.D., F.R.C.P.,
Physician to the Birmingham General Hospital.

(*Concluded from page* 119).

Case 3.—*Spasmodic Paraplegia, the symptoms developing themselves rapidly, and accompanied at their outset by Lowered Control over the Bladder and by Obstinate Constipation—Impaired Sensitiveness of the Rectum and Urethra.*

The third case is less fully reported than the two which precede, but presents, nevertheless, a sufficiently characteristic view of the disease. It will be observed that the access of the symptoms took place with much rapidity, and that at the opening of the case the functions of the bladder and of the bowels (of the rectum, at least) underwent a serious amount of interference—a condition which remained permanently, though in a lessened degree, so long as the patient continued under observation. Thus at the outset the case resembled the one I have recorded in the first part of this paper, though the later period of the history presented an unfortunate contrast. The anæsthetic state of the urethra and rectum was remarkable, especially as being so much out of relation with the sensitive condition of the other parts of the body. The nature and situation of the primary disease, whether seated in the cord or operating *ab extra*, and indeed whether the symptoms observed by us resulted from some pre-existing disease at all, remained unexplained. So far at least as treatment was concerned, it seemed proper, on account of certain features in the previous history of the patient, to proceed on the possibility of some syphilitic mischief invading the tissue of the cord. The result of the medication employed, if its continuance through six weeks afforded any means of judging, certainly did not afford any confirmation to the suspicion formed. Nor was the recumbent posture, which was steadily maintained, attended with any abatement in the complaint.

J. D., aged fifty-five. His father died of delirium tremens; one sister committed suicide; a brother and three other sisters have been healthy, During the last few years, at least, the patient has led an unsteady life, and has squandered his resources, descending thereby from a respectable position in society. Two years before admission he had an uncertain venereal affection on the glans penis; afterwards a red rash came out over his body. He was not salivated for it, but his doctor told him that his hair would be likely to fall off, and that his bones might be affected. Previous to this occurrence he had been quite free from any venereal complaint, and was the father of healthy children. He had contracted a questionable second marriage.

Four years before admission (1873) he jumped off a rick and broke his thigh; the accident was followed immediately by an attack of delirium (probably delirium tremens). In September, 1877 (a year or a year and a half after the venereal affection just described), he found his back becoming gradually weak; he was unable to carry a weight without encountering great fatigue, and finally he had to depend on a stick for support when stooping in his garden to pick up apples. He had previously been doing hard work, lifting heavy weights and standing a great deal.

About the same time he began to lose strength in his legs. The loss of power proceeded slowly, though he had not walked with comfort since October of the same year; he was compelled to help himself by leaning on neighbouring objects. From the beginning of the muscular weakness he had troublesome twitching in his lower extremities, and the legs jumped if anything touched them; a feeling of "pins and needles" was complained of in his legs and feet.

Early in the following month (November) he found some little trouble in passing his urine; then he felt constant desire to empty his bladder, passing only a small quantity of urine at a time, and the urine taking a considerable time before it made its appearance; he wanted strength, he said, to pass it out. With the symptoms of bladder-disturbance coincided complete constipation; he asserts that he passed three weeks without having an evacuation from his bowels, although he was taking Cockle's pills all the time. When at last the bowels acted, he was unconscious of the passage of their contents; and this condition of constipation and of impaired sensibility of the rectum has continued.

He sent for his doctor three weeks after the setting-in of these later symptoms. His bladder was then found to be full, but a catheter was not used. During the following two or three months he was obliged to keep a vessel in his bed through the night; then he began to regain more power of retaining his urine; but still he found it necessary immediately to obey the desire of micturating when it arose. The urine has, however, never been positively passed involuntarily.

Sexual appetite was not lost, and power of erection remained, but he had no consciousness whatever of the passage of semen. Erections have latterly occurred with morbid frequency.

About the time I am now speaking of, somewhere towards the close of the year, after the application of a blister to the spine, he had a sense of constriction around the base of the thorax; then the left leg felt numbed. He speaks also of a pain in each calf (? cramp) and in the joints of the lower extremities (? muscular tension). With these symptoms there was much stiffness in the inside of each thigh (adductors) and a tendency to drag the pelvis down towards the thighs.

He was admitted on July 6, 1878, ten or eleven months after the commencement of his symptoms. He had then the aspect of a man in good health and possessing a sound constitution; muscular nutrition was in good order. He was unable to stand without support, and the tendency of the muscles to fall into a state of rigidity rendered walking a matter of much difficulty; the feet just cleared the ground, one foot being slowly dragged in advance of the other.

When he was not excited his urine was passed with moderate ease; but on the occasion of our first examination of the abdomen a desire to pass urine was instantly produced, but it was five minutes before any water made its appearance, and then only half an ounce was evacuated, six ounces being drawn off by the catheter immediately afterwards. The patient was imperfectly conscious of the passage of the urine along the urethra, and did not know when the stream had ceased to flow. A dose of opening medicine, given about the same time, was followed by the passage of a stool quite unconsciously.

No evidence of disease of the vertebral column was discoverable. The passage down the spine of a hot sponge afforded no guidance.

The urine was healthy, as was the heart. I also found the optic discs in a perfectly normal condition.

The patient remained in the hospital until October 10 (three months) without undergoing more than a slight degree of improvement. During a part of that time he was watched by my colleague, Dr. Saundby, in my absence. The muscles of the lower extremities remained in a condition of incomplete rigidity, the condition of rigidity varying somewhat on each side; generally it was most pronounced on the left side, occasionally on the right. The ham-strings and the adductors were the muscles most severely affected, especially the gracilis, the tendon of which started out beyond the level of its neighbours. There was frequent and great complaint of the dragging sensation from the pelvis. The state of the weather had some influence over his symptoms, his complaints being most urgent during the prevalence of a moist condition of the atmosphere. At the last report before he left, he was still unable to stand, but contrived to creep the length of the ward, helping himself by the bed-posts, his knees being partially flexed, and his body bent; each foot was thrust forward with a sudden abrupt movement, and then was dropped heavily to the ground.

Only one observation on the state of sensation is recorded: it was normal, as regards contact, in both lower extremities, and in the glans penis, the penis, and the scrotum. At the last it was questionable whether he fully felt the passage of urine along the urethra, though he gained a greater amount of control over the action of the bladder and rectum. He noticed that when the dragging pain from the loins was at its worst he lost expulsive power from the bladder. Examination of the rectum by the finger disclosed much tonic resistance by the sphincters, which slowly yielded, giving place to a certain amount of relaxation.

It will be seen that whatever treatment was tried, failed in its purpose. The hypodermic injection of curare again failed in controlling the spasm, and Dr. Malet, our House-Physician, noticed that it had a marked effect in depressing the patient; he certainly walked better after it had been

omitted. Atropine administered by the mouth, and the succus conii, were equally ineffectual. The actual cautery was applied to the lumbar and lower dorsal region. As regards specific medicine, iodide of potassium up to two-scruple doses with one-twelfth of a grain of perchloride of mercury was given during the first six weeks of his residence in hospital; afterwards the perchloride was resumed a short time before the patient left. The recumbent posture in bed was maintained during the entire period of the patient's stay in the hospital.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

CHARING-CROSS HOSPITAL.

EMPYEMA—TAPPING OF THE CHEST—ESCAPE OF DRAINAGE-TUBE INTO THE PLEURA, AND ITS REMOVAL—RECOVERY.

(Under the care of Dr. T. HENRY GREEN and Mr. J. ASTLEY BLOXAM.)

H. F., a female patient, aged twenty-six years, married, was admitted on January 2, 1880. She then complained chiefly of pain in the right chest, with cough, dyspnœa, and had some purulent expectoration. Patient had enjoyed fairly good health until her first confinement, about fifteen months before, the only important fact in her previous history being an attack of what she says was inflammation of the lungs when she was eight years old. She had, however, always been markedly pale, and never was robust. Her family history seems to be exceptionally good. After her first confinement she had "inflammation of the womb," and appears to have been very ill for some time. She was unable to get about until eight weeks after the delivery, and for a few months afterwards she suffered from troublesome cough, but otherwise felt fairly strong and well. From May, 1879, until her second confinement, which took place eleven weeks before her admission here, she enjoyed fairly good health, cough being absent. Her second labour was rather a difficult one, and some uterine trouble followed, so that she was confined to bed for six weeks. The vaginal discharge stopped very early, and did not reappear. The child is alive and healthy, and was suckled by the patient until her admission, although she had but little milk for it. For the last five weeks she had suffered from cough, with much sharp pain in the right infrascapular and lower axillary regions; there had been much purulent expectoration; patient had lost flesh and strength, and had perspired freely at nights.

On admission she was found to be very pale and weak, with some emaciation. The finger-nails were clubbed. She had pain in the right side of the chest, so that she always had to lie on the left side; cough with expectoration of purulent matter was still troublesome, and at times there was considerable dyspnœa. Her temperature for the first week ranged between 99° and 100°; during the second week it was more irregular, running from 98° to 101·5°; pulse 90 to 100.

On examination there were found crackling sounds over the right apex, and marked dulness in the lower half of the right chest, especially behind and laterally, where there was slight bulging. Auscultation showed absence of breath-sounds below, with slight ægophony about the upper limit of the dulness. The left lung seemed healthy, breath-sounds being only slightly exaggerated. The apex of the heart was displaced outwards beyond the vertical nipple-line; no bruit accompanied the cardiac action.

The diagnosis was that there was effusion into the right pleura of a purulent character, with a suspicion that this empyema was connected with some phthisical change in the lung. The medical treatment was directed to reducing the night-sweats and cough, and to improving the appetite; but on account of the irregularity and height of the temperature after the first week, ranging as it did from 98° to 101·5°, it was resolved to evacuate the purulent effusion.

January 10.—The thorax was aspirated on the 8th, and some pus drawn away; to-day Mr. Bloxam performed paracentesis, and eight ounces of thick purulent material were removed. This was done antiseptically, and a gutta-percha tube was left in the wound. By the evening a further large quantity of pus had escaped by the drainage-tube, and the dressing had to be renewed. Evening temperature 100·4°.

11th.—Morning temperature 98·2°, evening 100°. Patient seems to be doing well and is taking plenty of nourishment.

12th.—Temperature, morning 100°, evening 101·2°.

20th.—The wound is now closed. A good deal of pus continued to ooze out for a few days after the last date; but the temperature, which had gone down to normal, began to rise on the 19th, and reached 100·8° in the morning. Yesterday evening the temperature was again 100·8°, and, as there were other symptoms of the re-accumulation of pus in the pleura, Mr. Bloxam to-day re-opened the wound, and a large quantity of pus was discharged. A drainage-tube consisting of a piece of an ordinary gum-elastic catheter was placed in the wound. A good deal of fluid kept coming away during the afternoon.

22nd.—Temperature normal this morning. The apex-beat of the heart is nearer its normal position than it has hitherto been, and patient has had a good night. At 6 p.m. it was found that the drainage-tube had slipped into the cavity of the pleura.

23rd.—Patient has had a bad night, and complains of great pain in the right side. Temperature 99·2° this morning.

24th.—Morning temperature 102·6°. Patient is in great distress. To-day she was put under ether, and Mr. Bloxam succeeded in removing the piece of catheter from the pleural cavity. In the evening the wound was re-dressed; patient then felt little pain, but was much exhausted. Pulse weak, 126.

25th.—Temperature fell last night to 99°; to-day it is normal. Patient is now tolerably comfortable.

From this date patient steadily improved, and the temperature only once was as high as 99°. The wound in the side has given no further trouble. Patient remains under treatment, but the acute symptoms have subsided.

Remarks.—The interest of this case lay in the fact of the escape of the drainage-tube into the wound, and its subsequent extraction. The possibility of the accident was borne in mind, and the piece of catheter, two inches and a half long, was secured carefully by tying it with thread, but, owing to some unusual movements of the patient, these threads were broken. In extracting it, Mr. Bloxam made an incision parallel to the upper border of the eighth rib into the pleural cavity, and passed in a bent probe. By a little careful manipulation the tube was felt, and seized, and successfully extracted. The accident gave rise to somewhat serious symptoms at the time, and caused some anxiety about the result of the case.

EAST LONDON HOSPITAL FOR CHILDREN.

EMPYEMA DISCHARGED THROUGH THE LUNG—SEROUS EFFUSION ON THE OTHER SIDE—COMPLETE RECOVERY WITHOUT DEFORMITY OF CHEST.

(Under the care of Dr. FRANCIS WARNER.)

SAMUEL P., aged four years, a delicate-looking boy, was admitted July 13, 1877. He had been attacked six weeks previously with feverishness, attended with cough, which obliged him to keep his bed. He had lost appetite and flesh. When admitted there was dulness over the whole of the right chest, back and front, and bulging, with obliteration of the intercostal spaces. The heart was displaced half an inch outside the nipple line, with complete absence of breath-sounds in the axilla. A few sibili and rhonchi were heard over the left lung. The skin was hot and dry, the face dusky; temperature not above 100° Fahr.; cough very troublesome.

July 17.—Aspiration of right chest; eleven ounces of thick, curdy, greenish, inodorous pus withdrawn.

18th.—Temperature 101° Fahr.

20th.—Heart beats in nipple line; intercostal spaces now seen as depressions.

24th.—Lost weight, one pound ten ounces. Amphoric respiration over the right base. Coughed up during the day twelve ounces of yellow purulent matter.

26th.—Coughed up four ounces of pus. Right chest immovable except at apex, where the vocal fremitus was markedly increased, with dulness on percussion, and tubular respiration. At the right base, back and front, amphoric respiration (pneumothorax). His appetite now began to improve. Veins of the chest enlarged.

27th.—Two ounces and a half of pus coughed up. Sternum now begins to fall in on inspiration. Commencing curvature of spine to right side.

31st.—Sternum still collapsing. No more pus expectorated.

August 3.—One ounce of pus expectorated. Appetite good.

6th.—Very little pus expectorated. Right base no longer amphoric; dull at apex.

14th.—Râles over right chest.

24th.—General health good. Enlargement of thoracic veins subsided; right chest regaining its movements. But little respiratory murmur at right base. Occasional râles.

September 5.—No contraction or deformity of spine; good respiratory murmur over the whole front of the chest. The patient was discharged to the country.

January, 1878.—Re-admitted under Dr. Eustace Smith, to whom I am indebted for the opportunity of further watching the case.

From the time he was discharged (September 4, 1877) till a week before re-admission he appeared quite well. He then began to complain of pain in his left chest, with cough, and became feverish; appetite failed, and he had to keep his bed. There were evident signs of pleuritic effusion on the left side, with complete dulness of the base behind, and tubular breathing above. The hypodermic syringe was inserted, and clear scrum drawn off. Slight cough; appetite good.

February 4.—Intercostal spaces bulging. Aspiration; four ounces of clear fluid drawn off. After this, crackling sounds heard in lateral region.

5th.—Signs of effusion continued; respiration amphoric under left clavicle, where a rub was heard.

12th.—No abnormal dulness in front; at base crepitation with rhonchus.

March 1.—Heart in normal site.

15th.—Spine straight; no retraction.

April 5.—Resonance at both bases perfect: a few bronchitic sounds over both lungs, especially the left. During this period of treatment (1878) no change of weight occurred. During the first fortnight the temperature was about 100°; then fever subsided.

May 27, 1879.—He again came under my observation as an out-patient for a slight otorrhœa, which soon disappeared. His general nutrition was good, and the boy had grown and looked cheerful and well. The heart was in its normal position. There was slightly impaired resonance at the right base behind (the side of former empyema); none elsewhere. Here the respiratory sounds were slightly feebler than on the left side, but there were no adventitious sounds; otherwise the lung appeared healthy.

Remarks.—This case affords a good example of the favourable result that may follow the bursting of an empyema through the lung. The tendency to suppuration, which in 1877 caused the pleurisy of the right side to become purulent, had passed away, when, in 1878, he was again attacked with pleurisy on the right side. The distortion of the chest resulting from the empyema was removed, apparently by the due and healthy expansion of the lung, for no signs of dilated tubes resulted. The general condition of good health, his increased growth and development, and the healthy condition of the lungs two years after the empyema, well illustrate how complete the recovery from an empyema may be.

M. Bertillon and the Paris Municipal Statistics.—The Paris medical journals speak in high terms of the appointment of this accomplished medical statistician as director of the Paris Municipal Statistics. It is anticipated that great improvements will be made in the monthly and weekly bulletins of the mortality which are issued. Indeed, with regard to the weekly bulletin this has already commenced. It contains each week a plan of Paris divided into districts, over which are distributed the various epidemic diseases according to their relative mortality; and enabling the medical men of these several districts to at once see the comparative prevalence of these affections.

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Medical Times and Gazette.

[SATURDAY, FEBRUARY 7, 1880.

THE MANCHESTER CHILDREN'S HOSPITAL CASE.

We have already laid before our readers, in the shape of a Manchester letter, a plain statement of the facts connected with the resignation by Dr. Humphreys of his post at the Children's Hospital, Pendlebury, Manchester. We have now heard both sides of the question, including the statement made at the annual meeting of the governors of the institution, so that at least we cannot be accused of having listened to only one side of the question. Nevertheless, strange to say, our opinion is exactly the same as that of those whose verdict was pooh-poohed because they had not heard both sides. Briefly as we can put it, the facts of the matter are these: Dr. Humphreys, who had been a first-rate man at Cambridge and a fellow of John's, had subsequently turned his attention to medicine, which he studied most enthusiastically. Especially he worked at the subject of the diseases of children, with which he was unusually well acquainted; and it was, as confessed by the authorities themselves, the testimonials in his favour given solely on this ground which secured him the appointment in connexion with the Children's Hospital at Pendlebury. At first Dr. Humphreys gave, as the Hospital reports show, great satisfaction; but latterly something seemed to go wrong. It was said that Dr. Humphreys, when he succeeded Dr. Borchardt, was not a good administrator, and somebody else (his junior) was after a time appointed as chairman of the Medical Board in his stead. This proceeding naturally alarmed Dr. Humphreys, and he asked for an explanation. He was told that it meant nothing derogatory to his position, and so he acquiesced. Viewed by the light of later experience this was an act of unwisdom on the part of Dr. Humphrey

and it will be a lesson to all and everyone who may be placed in any similar predicament to resist the first beginnings of things. We can easily conceive why Dr. Humphreys allowed this matter to pass, but we can also recognise the meanness of spirit which can now, at this interval of time, refer to this transaction as a justification of conduct unworthy of gentlemen, however high or low in the social scale. It was discovered then and there, and agreed upon, that Dr. Humphreys was no born administrator. Little time had been permitted him to acquire that facility of transacting business which comes of practice alone. But it was also fairly recognised that, however anxious they might be to get rid of such a heinous delinquent, a mere accusation of this gross misconduct or incapacity would hardly justify the managers, in the eyes of the public, in summarily dismissing Dr. Humphreys. Accordingly they waited. Dr. Humphreys had been assured that his position had been, if not unassailed, at all events left unimpaired, and he was allowed to pursue his work in peace, but evidently well watched.

Next it was found that Dr. Humphreys did not give clear enough directions to the nurses. How a knowledge of this reached the ears of the governors we are not informed, but internal evidence would point to the Lady Superintendent as the medium. Well, as regards this, a somewhat extended acquaintance with hospital management teaches us that such complaints, if made at all, should be made publicly and discussed publicly. They should be made in writing, should be submitted to the Medical Board or Committee of Governors, and fully considered in the presence of accuser and accused. Was this ever done in Dr. Humphreys' case? We fear not. Nevertheless, the chairman does not hesitate to say that Dr. Humphreys' "want of clearness and decision in instructions given with regard to the treatment of patients . . . . finally convinced the Board of Governors that he (Dr. Humphreys) was incompetent for the position he held."(a) Such a statement, coming from such a source, should not be allowed to pass unnoticed. If there was any lack of clearness, it was the duty of the sister of the ward, or of the Lady Superintendent, to see that any obscurity was removed. If there was a want of due apprehension on the part of the nurse, it does not, as a matter of course, follow that this was the fault of Dr. Humphreys.

But the climax was approaching, and the event (for which we cannot help thinking that the way was duly prepared) soon occurred. This was to be the means of getting rid of a now obnoxious and, according to the chairman's own showing, an already condemned man. Nevertheless, the very event itself goes emphatically to show that Dr. Humphreys still had his heart in his work and in the interests of the place. A trustworthy nurse or sister who had his confidence was under notice to leave. Dr. Humphreys, who duly valued her services, undertook to speak to the Lady Superintendent on the subject. This was probably, from a worldly-wise point of view, an unfortunate step. At all events, a somewhat sharp discussion arose, during which Dr. Humphreys told the lady that he would repeat certain parts of the conversation to the nurse concerned. This also was unwise, but there was nothing in it of moral wrong, nothing incompatible with straightforward honesty or with the position of a man who earnestly desired the welfare of the institution with which he was connected. But the bolt had sped—rather we should say the mouse-trap had closed; at all events Dr. Humphreys had been found doing something which the House Committee thought wrong, and he was promptly suspended. Under the circumstances there was only one course to follow—that was, resignation,—and Dr. Humphreys resigned his appointment. Again, however, we must ask the question, how and in what form did the information reach the Committee as to this discussion between the Lady Superintendent and Dr. Humphreys? And again we are compelled, in default of more exact information, to conclude that the lady herself was the informant, and that the proceedings took place in the absence of Dr. Humphreys.

There is probably, we believe, nothing more likely to give our professional brethren a conception of the men with whom Dr. Humphreys had thus to deal than the following letter addressed by the Chairman of the Hospital Board of Governors to the Editor of the *Manchester Examiner*, in reply to one most ably written on the same subject by Dr. J. Leech. As a specimen of brutal cynicism and disregard for the feelings of another we have rarely seen its equal in writing. The letter runs as follows:—

THE CHILDREN'S HOSPITAL, PENDLEBURY.

[To the Editor of the Examiner and Times.]

Sir,—Dr. J. Leech, in his letter in your impression of this morning, concludes by saying:—"Such action as the Board has taken in Dr. Humphreys' case tends to prevent those whose services would prove most valuable to the Hospital from taking office at Pendlebury." I wish to draw the attention of Dr. J. Leech to the fact that the Board has taken no action whatever in Dr. Humphreys' case beyond accepting his resignation when tendered, and declining controversy with him; that the suspension was the act of the House Committee on November 25, and would not take effect till the monthly meeting of the Board of Governors on December 6, or for ten days; that for that time the suspension was *in camerâ* and not published; and that it was open to the Board, if they disagreed with the action of the House Committee, to annul the suspension, reinstate Dr. Humphreys, and even to censure the House Committee; and although I am not of opinion that this result would have been a likely one, yet if Dr. Humphreys thought the action of the House Committee uncalled for, it was perfectly open to him to meet the House Committee before the Board and justify his position, if he could. By at once sending in his resignation he avoided a course which any official, conscious of being in the right, would have certainly taken.

Yours, &c., EDWARD CROSS,
Chairman of the Board of Governors.

Manchester, February 2.

Had Dr. Humphreys been, let us say, an absconding clerk accused of embezzlement, such language would hardly have been justifiable; but, referring as it does to a gentleman of high character and social position, it can only be quoted to be condemned in the strongest possible fashion. From this letter it is plain that Mr. Cross looks upon all who are or may be in Dr. Humphrey's position simply as salaried servants, to be treated like an unsatisfactory footman, housemaid, or any other menial. And it would be well for those who are or may be connected with this Hospital to lay the lesson well to heart; for it is evident that, however "conscious" they may be of being "in the right," when their time comes they have only to expect the treatment Dr. Humphreys has received—improved, perhaps, by the importation of fresh sneers and jeers, manufactured according to the circumstances of the case.

Unfortunately, there are still other elements in the case which demand attention, but with regard to which little or no evidence has been laid before the public. It seems to us that the conduct of certain of Dr. Humphreys' colleagues must be open to question; and assuredly the whole facts of the case point to a careful consideration of the proper position of *lady* superintendents and *lady* sisters. We can have no desire for the reappearance of "Sairey Gamp" on the stage, but these lady sisters begin to show both horns and cloven hoof.

(a) We would here refer our readers to a letter originally addressed to the Editor of the *British Medical Journal*, but forming part of the *res gestæ* at the annual meeting of the governors of this Hospital, when it was read as the official defence of the managers of the Hospital. For the ake of convenience it is printed in another column.

PLEURITIC EFFUSION AND PHTHISIS PULMONUM.

Professor Gerhardt, of Würzburg (*Wiener Med. Wochenschrift*, No. 40, 1879), offers some interesting remarks on the association of the above-named affections. He premises that the pleura is probably more often the seat of effusion than any of the other serous membranes because it is almost uninterruptedly exposed to negative pressure, except at the height of ordinary expiration and during forcible expiration: for example, in the act of coughing. Owing to this negative pressure a sort of suction is exerted on the membrane, which tends to favour the occurrence of exudation the moment the stimulus of inflammation is superadded. In phthisis not only is the latter factor very often present, but effusion is frequently favoured by processes of contraction in the lung itself. There are *four* ways in which pleuritic effusion may be associated with phthisis. First, the pleurisy precedes the phthisis. Some time after the former, lung symptoms arise, probably due either to infection from some caseous residue of the pleurisy, or to infection of the lung from the secretion of bronchiectatic cavities formed in its substance to compensate for portions contracted by pleuritic adhesions. Secondly, the pleurisy is excited by commencing phthisis, as evidenced by the previous existence of hæmoptysis, wasting, catarrh, etc. Here the phthisis may sometimes be accelerated by the additional weakness and fever, etc., caused by the pleurisy; and rapid re-absorption of the effusion is sometimes a source of danger, though occasionally the patient from this time seems to take a new lease of life. The third, and most ordinary, form of connexion between phthisis and pleurisy is the development of the latter in cases where the lung is already softening or the seat of cavities. Pleurisy of the apices in phthisis is, as is well known, generally "dry." Slight transient effusions also occur; but, according to Gerhardt, the effusion in this form is most apt to be moderate in amount and to have certain definite limits. The upper edge of the dulness reaches near the spine as high as the lower angle of the scapula, and then sinks slightly from within outwards; while in the lateral region it descends with a steeper curve and meets the diaphragm outside the nipple line. The area of effusion is marked by greater prominence of the side, so that it can often be detected without percussion. The above-mentioned limits of dulness seem to correspond to the zero point of intra-pleural pressure; and in many cases the exudation remains obstinately unaltered at this level. It fills at this period only the space which is left in the pleural cavity by the retraction of the lung; hence the vocal fremitus is weakened over the whole dull area, and is not, as happens later on, increased at its upper margin, where the lung itself has become airless and condensed, and so gives rise to part of the dulness on percussion. Whenever this "stereotyped limit" of effusion, as Gerhardt calls it, is exceeded, the chances of absorption of the effusion become smaller, owing to compression of the bloodvessels and lymphatics of the pleura by its positive pressure. In phthisis the effusion tends to remain long stationary, owing to the great amount of retraction in the lung tissue, to the rigidity of the lung substance which renders it less capable of re-aëration, and probably also to the presence of pleuritic adhesions. The existence of an effusion within the above limits seems to affect the patient's temperature little one way or the other. His breathing, however, suffers frightfully if effusion comes to complicate his previous lung disease. He can accommodate himself less easily to the external than to the internal diminution of breathing space.

The fourth and last case in which pleurisy complicates phthisis is where pneumothorax occurs in patients with not very advanced disease, and a considerable reserve of force. The fistula may then quickly close, the small amount of air in the pleural cavity be absorbed, and only a simple empyema remain. Professor Gerhardt has observed several such cases, in which the empyema undoubtedly originated thus. In operating on them the purulent character of the effusion can be safely predicted. In general the pleuritic effusion of consumptives is serous, according to his experience; the minority of such cases are purulent, very few hæmorrhagic.

The treatment consists in perfect rest in bed to prevent the necessity for deep inspirations during muscular activity. Narcotics may be given to quiet the cough, and as drugs promoting absorption, digitalis and potassic acetate, and sometimes squills or quinine. Purgatives, or injections of pilocarpin, occasionally seem to start the process of absorption. Iodide of iron Gerhardt has not found of much use. For mechanical removal of large effusions he considers there are three special indications—danger to life, long persistence in spite of other treatment, and great inconvenience to the patient.

To avoid brusque variations in the suction power of the aspirator, a flexible tube connected with the needle should be attached to one neck of a three-necked bottle, the syringe to the second, and a mercurial manometer to the third neck. The bottle should be of three to five litres capacity, so as to distribute the pressure over as large a surface as possible. Gerhardt has thus succeeded in removing quite small bodies of effusion with a suction force of only thirty millimetres of mercury. The needle should be thrust into the chest at the lowest point of the area of complete dulness and absence of vocal vibration, consistent with its not wounding either the diaphragm or pericardium. If the operation succeeds, (1) the dyspnœa will diminish; (2) the circumference of the thorax will also become less; (3) fever will diminish, at any rate for some time, provided the needle used was perfectly clean; (4) the blood-pressure, fulness of the pulse, and amount of urine passed, will increase, the frequency of the pulse diminish; (5) absorption of any remaining effusion will be promoted; (6) in consumptives with moderate laryngeal ulceration, aphonia may disappear, and a tolerably powerful voice be recovered. Unfortunately, in most cases these results are only temporary, and even though there is a complete disappearance of the effusion, the phthisis kills the patient all the same in a few months or years.

THE WEEK.

TOPICS OF THE DAY.

A deputation from the Council of the National Association for the Promotion of Social Science had an interview with the President of the Local Government Board last week, and urged upon him that, in the Bill to be introduced for taking next year's Census, provision should be made in order to secure a return of the religious profession of every individual in the United Kingdom, of the nature of illness wherever it exists, of the number of rooms in each house, and of the nature of employments, to a fuller extent than hitherto. The deputation also urged that the Census should be taken every five years. Mr. Sclater-Booth promised to give the views of the deputation full consideration. Probably every association or body with a mission or "a view" will wish to make the Census supply it with special information.

The *United Service Gazette* states that it is glad to find that the question of exchanges in the Army Medical Department is being ventilated. Combatant officers are allowed to make an open declaration on exchange, without entering into detail of expenses incurred, whereas medical officers are under the necessity of making out statements as if they

were stewards rendering accounts to their masters. Cases have occurred in which it has been suggested that even the outfitter's bill for an increase to the medical officer's "family wardrobe" should be attached, and it is only a matter of common sense that such statements of expenses should no longer be required. One and the same declaration should apply to the whole Army.

It is with feelings of the most lively satisfaction that we have to record the apprehension and punishment of one of the systematic depredators upon the profession. At Southwark Police-court, last week, Adolphus Ross, a well-dressed young man, described as a lunatic-attendant, was brought up for final examination, eharged with being concerned in stealing surgical instruments and other valuable property from the surgeries of a number of medical gentlemen in various parts of the metropolis. There were fourteen or fifteen charges against the prisoner, and witnesses were present to identify him. Eventually the prisoner pleaded guilty to the first two charges, and he was sentenced to six months for each offence, making altogether twelve months with hard labour.

With all the pomp of eivic magnificence, the certificates of efficiency gained by members of the Volunteer Ambulance Department during the past year were distributed last week in the Guildhall by Surgeon-Gcneral Munro, C.B., of the Army Medical Department. The Lord Mayor with the Lady Mayoress, Baroness Burdett-Coutts, and several others attended on the occasion. The object of the movement is to instruct Volunteers in the primary dressing of wounds, in stretcher and ambulance drill, and in the various extemporised methods of carrying the wounded. At least four men per eompany are instructed, as well as the surgeons, an Ambulance Department for each regiment being thus formed. The present movement dates from Oetober, 1876, and, upon this occasion, of 882 Volunteers attending the eleven classes into which the Department is divided in the metropolis, 511 received certificates of competency. In delivering the eertificates, Surgeon-General Munro expressed his complete satisfaction as to the manner in which the Volunteers had acquitted themselves, and he took occasion to say that the system demonstrated that evening had been recently tested in the regular Army during the operations in South Africa, and with so much success that it had received the high commendation of Sir Garnet Wolseley.

The tenth annual meeting of the so-called Ladies' National Association for the Abolition of State-regulated Vice was held last week at Woolwich. Mrs. Ellen Bright Clark, of Street, Somerset, oceupied the ehair, supported by Mrs. Lucas, Mrs. Thomasson, and others. About three hundred ladies were present, including representatives from repeal associations at Manchester, Liverpool, Leeds, Hull, Birmingham, Bristol, and other parts of the country. A resolution was passed again proclaiming the ladies' implacable and undying hostility to the Contagious Diseases Acts. The fashion of the present time, which is in favour of according equal rights to women with those enjoyed by men, surely ought always to allow that unsavoury subjects of this description should at least be left to the sterner sex for consideration; but then these ladies are strong-minded—which term, applied to a woman, is a polite way of hinting that she is "masculine."

The following letter has just been issued, giving the views of the Committee of the Home Hospitals and Association for Paying Patients on the recent decision of the Master of the Rolls:—"We beg to commend to your careful consideration the enclosed papers relating to a public meeting of great importance for establishing hospitals for paying patients. You will observe that one-half of the preliminary capital fund has already been subscribed. The Managing Committee having experienced insurmountable difficulties in converting the house they had secured in the centre of the Western district into a 'pay hospital,' are now fitting up an eligible freehold house which they have purchased in Fitzroy-square. A recent decision of the Master of the Rolls proves that none but freehold premises can be utilised without the consent of the ground landlord. This decision forces the Committee to make a strenuous effort to obtain the second half of the preliminary eapital fund, and it has been decided to confer on those who assist them in this task the privileges of governors or members. It is hoped that the many who are interested in the progress of this most successful and beneficent movement will show their practical sympathy by assisting to raise the additional sum required (£10,000) without delay. Such a sum will enable the Committee to proceed vigorously with the scheme they have so carefully elaborated." The letter eoncludes by pointing out the advantages to be derived by the paying portion of the community through the opening of these hospitals. We shall be glad to see the experiments of hospitals of this kind thoroughly tried; and still more glad if the results are satisfactory.

The *Daily Telegraph* observes that the statement which has appeared in several of the papers, that the Empress Eugénie will be accompanied during her journey in the steamship *German* to and from Zululand by Surgeon-Major F. Beaufort Scott, M.D., late 18th Hussars, must be read with the qualification that Dr. Scott does not occupy the position of medical adviser to thc illustrious traveller. The Empress has intimated to the Union Steamship Company her wish that the surgeon of the ship shall attend upon herself and suite, if necessary. Dr. Scott accompanies the Empress as a friend of the late Prince Louis Napoleon.

There is every reason to believe that the negotiations which have taken place between the Government and the directors of the London water companies are founded on a capitalisation of the dividends, estimated with a due regard to all contingencies. Where the full statutory dividend is not at present being paid, the probability of any increase is to be allowed for. The terms have now been settled with all the companies, the Lambeth Company being the last to come to an agreement. The machinery and works of the various companies are to undergo inspection with a view of ascertaining what amount of outlay, if any, is requisite to render them efficient. The inspection has already been completed in the case of the Chelsea Company, and the works of the Lambeth Company are under examination. The financial scheme will consist in the creation of water stock; and it is understood that the local rates of the metropolis will be made the guarantee for the payment of the dividends.

At Marlborough-street Police-court, on Monday last, a superintendent of the E Division of Police said that the other day the magistrate had directed his attention to the disturbances which arose in the neighbourhood of Middlesex Hospital, and the consequent suffering caused to the inmates; he wished to state that a constable had now been placed on duty there, and he had no doubt there would be no further complaints. He desired, further, to bring to the notice of the secretaries of the various hospitals a proposal to place boards of uniform pattern outside those institutions, so that the general public might know when they were passing a hospital, and be induced to refrain from making noises or driving too quickly by. At some of the hospitals this idea had been already carried out with the most successful results.

Legislation in Jersey, if sure, is slow. A Bill has just been laid before the Jersey States for the registration of chemists and druggists duly qualified in accordance with the

provisions of the English Pharmacy Act. Out of sixteen persons now trading as druggists in the island, only three are said to possess more than the simplest qualifications.

THE QUEEN'S SPEECH.

Her Majesty opened Parliament in person on Thursday, and, greatly to the delight and satisfaction of her faithful and loyal subjects, brought with her "Queen's weather." The day was fine, sunny, and clear—the first clear, fogless day Londoners have seen for so long that they must have felt tempted to wish that her Majesty would go on opening Parliament *de die in diem*. Of her Majesty's Speech there is nothing to say, from the medical standpoint, save that we learn from it that a Bill is promised for consolidating and amending the Lunacy Laws; that the Criminal Code will be again brought forward for consideration; and that "other measures will be introduced into Parliament."

THE ROYAL COLLEGE OF PHYSICIANS, LONDON.

At the meeting of the Royal College of Physicians held on the 29th ult., Drs. W. H. Dickinson, Lauder Brunton, and David Ferrier were appointed to adjudicate the Benett-Stanford Prize for the best essay on the Etiology, Pathology, Prevention, and Treatment of Hydrophobia. The annual Report of the Examiners for the College Licence was received, from which it appeared that during the past year 28 candidates presented themselves at the Primary Examinations for the licence, of whom 18 were approved and 10 were referred back to their studies. At the Pass Examinations 123 candidates presented themselves, of whom 108 were approved and 15 were unsuccessful. In the year 1878, 23 candidates appeared for the Primary and 89 for the Pass Examinations. The Examiners observed that not only was the number of candidates greater in 1879 than in 1878, but they were of a better quality. At the Primary Examinations in 1879 only 35 per cent. were rejected, against 60 per cent. in 1878; and at the Pass 12 per cent., against 23 per cent. in 1879. A report was also received, and adopted, from the Censors' Board, suggesting a plan for utilising the medical reports received at the Colonial Office. The suggestion made is, we believe, that one, or more, physicians shall be appointed to examine and report upon these documents; the examiner or medical referee to be nominated by the College, and paid by Government. It is satisfactory that some step has been taken in this direction at last. Medical reports and communications, often of great value, are frequently received by the Colonial and India Offices, and at present no use whatever is made of them. Very often they are sent on to the College of Physicians, and there—they "are placed on the table," and nothing is ever heard of them afterwards.

THE SPREAD OF INFECTIOUS DISEASE.

On February 2, in Master Lane's Office, Four Courts, Dublin, an action was brought by a widow residing at Howth View, Sandymount, to recover damages for injury and loss incurred through the defendant's having, when taking lodgings from her, fraudulently concealed that members of his family, with whom he resided, were affected by a contagious disease. The defendant, who is a car proprietor, had allowed judgment to go by default, and the present inquiry was made to measure the damages. The plaintiff deposed that she had resided at Howth View for nine years. On September 16 last, the defendant, Mr. D'Arcy, who had previously been at her house visiting a lady lodger, called, and asked could she accommodate his wife with a room—that owing to the death of one of her boys she had been greatly put about, and was ordered change of air. Plaintiff asked what the boy died of, and the defendant replied he could not say. The room was let for Mrs. D'Arcy, but when she came she brought a child two or three years of age with her, and subsequently her daughter also came. In about a week the child took ill, and the doctor was called in. The defendant, in answer to plaintiff's inquiries as to the illness, said the little fellow had only caught cold; but three days later he was removed to hospital, where he died. The doctor who attended him cautioned Mrs. D'Arcy not to enter the room and to have everything disinfected. The defendant on leaving locked the room door, and it so remained for a week, when he called with a man, who left something in the place that created a dreadful smell. The result of this was that her lodgers left, and the plaintiff had been at great loss since. She also took ill herself. In the end, the jury assessed damages at £10, which the Master observed was a very small sum under the circumstances.

THE TENACITY OF LIFE OF THE EMBRYO.

A very curious and highly interesting account is given by Dr. Rawitz of Berlin (*Archiv für Anat. u. Physiol.*, Supplement-Band, 1879, page 69) of an observation which he made upon the heart of a human fœtus, and which illustrates in a remarkable manner the tenacity of life of the embryo. An embryo was discharged enveloped in the membranes, the whole measuring eleven centimetres (about four and a half inches), whilst the fœtus itself measured eight centimetres (three and a half inches). Before the removal of the sternum, in the course of dissection, pulsation was observed in the region of the heart; but it was not until the chest was opened that Dr. Rawitz could persuade himself that the cardiac contractions were going on. When the pericardium was exposed, he was astonished to find that the auricles and ventricles were pulsating with perfect regularity; and what is most remarkable of all, they continued to do so for four hours! The observers were able to make a careful study of the rhythm of the cardiac movements and of the various accompanying phenomena. After a time, asystoly set in, and the movements thereupon gradually ceased.

THE NEXT BIENNIAL INTERNATIONAL MEDICAL CONGRESS.

During the meeting of the International Congress of Medical Science, at Amsterdam, last year, an unanimous wish was expressed that the next biennial meeting should be held in England. This having been made known to the President of the Royal College of Physicians, London, and the President of the Royal College of Surgeons of England they—some three months ago, we believe—took counsel, together, and with some of the leaders of the profession, not as to whether the Congress would be welcome—of that there could not, of course, be any doubt—but as to what steps should be taken in order to insure that the welcome should be the most full and fitting possible. And, with the same object, they communicated with the Universities of Great Britain and Ireland, the medical corporations, the Royal societies, the principal medical societies, and some other bodies, with the view of forming a fully representative committee to make such arrangements as may seem best and most desirable. We do not know exactly whether such a committee has yet been constituted, but matters have proceeded so far that the President of the College of Physicians has mentioned the subject at the last two meetings of that College, though it has not yet been brought officially before the Council of the College of Surgeons. It cannot be doubted, however, that the profession, as a body and individually, will be eager to give the Congress a welcome worthy of themselves and the country.

THE SELECT COMMITTEE ON THE MEDICAL BILLS.

It is generally known now, we imagine, that the Crown representatives on the General Medical Council had an interview, last week, with the Lord President of the Council (the Duke of Richmond and Gordon) and the Chancellor of the Exchequer upon the subject of the Select Committee on the Medical Bills. The Crown representatives, in common with other members of the Medical Council, have felt aggrieved by the position in which the Council was left at the end of last session, when serious charges of inefficiency had been made against it in the evidence given before the Select Committee; and they were therefore glad to have an opportunity of urging upon the Government the great importance of completing the business of the Committee, and of obtaining its report at the earliest possible date. The Government, in reply, stated that the Select Committee would be re-appointed at the commencement of the approaching session, and that it would be requested to present its report as soon as possible: not very new news to the Crown nominees, we imagine. We look upon it as not at all improbable that when the Committee is re-appointed the Government will propose some modifications in its constitution. It has been remarked that the Universities of Edinburgh and St. Andrews and the University of Dublin are represented on the Committee, but not any English University. The University of London, we believe, thinks that it ought to be represented, or, at any rate, some of its medical graduates think so. Mr. Lowe might perhaps be added with advantage, late as it would be, to the Committee; and then, as politics must be considered, especially where constitutions are concerned, a representative of either Oxford or Cambridge University could be taken from the other side of the House.

ASSOCIATION OF SURGEONS PRACTISING DENTAL SURGERY.

The annual meeting of this Association was held on Wednesday, January 28, when the treasurer's report was received and adopted, showing the Society to be in a highly prosperous and flourishing condition. The following officers and Council for 1880 were duly elected:—*President:* Mr. W. A. N. Cattlin. *Vice-Presidents:* Messrs. J. A. Baker, S. Cartwright, A. Coleman, S. J. Salter, F.R.S., and Dr. Smith, F.R.S. Edin. *Treasurer:* Mr. Edgelow. *Hon. Secretary:* Mr. Hamilton Craigie. *Council:* Messrs. E. Bartlett, S. H. Cartwright, J. Fairbank, F. Fox, C. Gaine (Bath), W. D. Napier, W. Ranger, and A. Winterbottom. The first dinner of the Association took place in the evening at the Langham Hotel, when over fifty Fellows and their friends were present, amongst whom were the Presidents of the Royal Colleges of Physicians and Surgeons, Sir William Gull, Dr. Cholmeley, Dr. Quain, Mr. Brudenell Carter, Mr. T. Holmes, Dr. Cockle, Professor Lister, Mr. Young, M.P., Mr. Edwin Saunders, Dr. Andrew Clark, etc.

SURGEON-MAJOR ANDREW DUNCAN, M.D., 23RD PIONEERS.

The latest account we have seen of Dr. Duncan's health is very satisfactory. It will be remembered that at the engagement of Charassiah, on October 6 last year, Dr. Duncan was hit on the right side of the chest by an Enfield rifle bullet. The ball entered over the seventh intercostal space, about three inches behind on the right side, and was cut out from under the skin above the liver just inside the eighth costal cartilage. For some hours there was urgent dyspnœa and severe pain in the right shoulder. A few days later he had pleurisy of the right side with considerable effusion. From that he recovered, but afterwards lost flesh, had night-sweats, and a persistent high temperature. The posterior wound healed, but in front a sinus was left which discharged fœtid pus; and at the end of November Dr. Duncan was invalided On the journey down from Cabul he was very ill; and when he reached Lahore, December 9, he placed himself under the care of Surgeon Edward Lawrie, the Professor of Surgery at the Lahore Medical School, who thought that the condition of the sinus at the point of exit of the bullet pointed to the presence of some foreign body. He laid the sinus freely open, and two or three inches from the orifice, in the track of the bullet, he found a piece of flannel shirt and two or three bits of cloth. Professor Lawrie found the seventh rib had been fractured at its end, and was of opinion that the bullet had gone round the chest in the seventh intercostal space, and had broken the seventh rib when it could no longer follow the intercostal groove on account of its change in direction towards the sternum. All evil symptoms disappeared with the removal of the foreign bodies from the wound, and Dr. Duncan was very soon able to proceed on his journey.

HEALTH OF ST. MARYLEBONE PARISH FOR DECEMBER LAST.

During the month of December 383 births and 362 deaths were registered in the parish of St. Marylebone; the latter represented an annual death-rate of 29·5 per 1000 of the population, being 6·87 in excess of the death-rate of the previous month, but rather less than in the corresponding month of 1878. Bronchitis was prominent amongst the causes of death, and destroyed the lives of 105 persons, constituting no less than 29 per cent. of the total mortality; thirty-three children under the age of five years fell victims to this disease. Dr. John Whitmore, the Medical Officer of Health, points out that this high rate of mortality from, diseases of the respiratory organs is sufficiently accounted for by the fact that the mean temperature of the entire month did not exceed freezing-point, whilst very frequently at night the thermometer registered 10°, 12°, and 15° of frost. In the zymotic class of diseases whooping-cough proved the most fatal; whilst ten deaths were registered from scarlet fever, two from measles, and four from enteric fever. The Resident-Medical Officer at the Middlesex Hospital reported to Dr. Whitmore the admission of a case of fever into that institution from Foley-street, which appeared to him to be typhus, and the patient was at once transferred to the London Fever Hospital. It subsequently transpired that this person was suffering from typhus, but although inquiries were instituted no satisfactory light could be thrown on its origin. Dr. Whitmore explains that he has specially referred to this case on account of the fact that in other parts of London there appears to be something amounting to an epidemic of typhus.

VITAL STATISTICS OF THE COLONY OF NEW SOUTH WALES.

The twenty-third annual report of the Registrar-General of New South Wales for the year 1878 shows that the estimated population of the colony on December 31 of that year was 693,743 persons. The increase on the previous year amounts to 31,531, or 4·76 per cent. The estimated number of males was 385,678, and of females 308,065; giving 556 males and 444 females to 1000 of population. The number of births registered in the colony during the year under notice was 25,328, being 1477 in excess of the previous year's return, and giving a ratio of 37·50 to every 1000 of estimated population; this is slightly in excess of the figures of the previous year, but 1·26 per cent. lower than the average of the previous nine years. The number of deaths registered during the year was 10,763, which is an increase of 894 on the previous year; the death-rate for the colony for the year was 15·93 per 1000 of estimated population, as against 15·34 for the previous year. The average death-rate of the previous nine years was 14·96, which is lower by 0·97 than the figures

for the year under review. The number of children who died under five years of age was 4884, which makes the percentage of these deaths to be 45·37 of the total mortality for the year. With the exception of the year 1875 this is the highest percentage of any year in the decade. It is 1·86 per cent. over the figures of the previous year, and also 2·52 per cent. in excess of the average of the previous nine years. Zymotic diseases during the year 1878 were responsible for 25·61 per cent. of the total number of deaths, and of this class the order known as miasmatic furnished 22·66 per cent.; these figures were 2·34 in excess of those for the previous year, and 3·04 per cent. in excess of the average of the last nine years. The four warmest months of the year were December, January, February, and March, the mean temperature ranging from 71·8° to 69·4°. The months of December and January head the list with the highest rate of mortality. February, March, April, and May supplied the greatest rainfall, the number of inches being 6·87, 5·98, 5·75, and 8·10 respectively.

ANNUAL MEETING OF THE DUBLIN BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

The third annual meeting of this branch was held in the Hall of the King and Queen's College of Physicians, Kildare-street, Dublin, on Thursday, January 29. The chair was taken by Dr. Samuel Gordon, President of the branch. There was a large attendance. Dr. George F. Duffey, Hon. Secretary, read letters of apology from Dr. Humphry, President-elect of the Association, of Cambridge; from Dr. Kinkead, President of the West of Ireland Branch; and from Dr. B. O'Flynn, President of the South of Ireland Branch. Several new members, including Surgeon-Major Reynolds, V.C., having been admitted, the Hon. Secretary read the report of the Council. The President then delivered an address, in which he touched on the objects for which the British Medical Association exists, and strongly advocated the appointment of a Minister of Public Health at the head of a separate Government department, and aided by a staff of competent medical advisers. At the conclusion of the President's address, Dr. J. W. Moore read a paper "On the Compulsory Notification and Registration of Infectious Diseases," in the course of which he said: 'Viewed as a problem in political economy, there can be no doubt regarding the paramount importance of ascertaining the actual sanitary state of a population at any given time. Difficulties undoubtedly stand in the way of carrying out an effective system of disease-registration, but they are not insurmountable, and the fact that several European governments have long since inaugurated and prosecuted such a system should encourage us in essaying to follow their example. In the vanguard of progress in this direction the Scandinavian nations occupy the place of honour. Our American cousins have also adopted a system of registration of disease in some of their large cities, and the authorities of some of the Swiss cantons are following their example. There is, however, one class of affections which, in the interest of the community, should be registered with as little delay as possible —at least in all large towns—namely, epidemic infectious diseases. Two things would seem to be necessary in the case of outbreaks of epidemic disease—first, the immediate compulsory notification of such outbreaks to the sanitary authorities; secondly, the early registration of all cases of these affections, and the publication of the tabulated results at frequent intervals by the general registration offices of each division of the United Kingdom. Towards securing the second object but little has yet been done. As regards the notification of infectious disease, on the contrary, Parliamentary powers have already been sought and obtained by fifteen towns in England and Scotland." After an interesting discussion the meeting resolved—"That this Branch is of opinion that the compulsory and early notification of the occurrence of cases of epidemic disease in a large city like Dublin is of the greatest importance, and that the Council are requested, with as little delay as possible, to take whatever steps may seem to them best calculated to promote the attainment of this object." In the evening the members of the branch dined together at the College of Physicians. Several distinguished visitors, including the Right Hon. the Lord Mayor of Dublin (Mr. E. D. Gray, M.P.), and the Hon. David Plunket, M.P., were present as guests.

DR. TATHAM ON THE HEALTH OF SALFORD.

Regardless of the heavy amount of labour involved, Dr. John Tatham, Medical Officer of Health for the district of Salford, Manchester, determined at the close of the year 1878 to compile a review of the more important statistical facts occurring during the ten years, then completed, since the inauguration in Salford of a Sanitary Authority. The task of reducing on a uniform system the huge mass of facts contained in the statistical records of this period has been so laborious that the report could not be completed until the latter end of last year, and it now presents a history of the health of the district for the years 1877 and 1878, in addition to the decennial summary. The principal interest, Dr. Tatham observes, attaching to a record such as the one under notice is derived from the fact that it marks in detail the successive steps by which, from year to year, the death-toll has been lightened, and a higher standard of general health has been attained, whilst the annals of the future will show, on comparison, how far the rate of life-saving effected during the last decade has been maintained, or in what proportion it may have been exceeded. Dr. Tatham has spared no pains to render this report—which is necessarily somewhat voluminous—correct in all its details, and he acknowledges his indebtedness to Dr. Buchanan, of the Local Government Board, for his suggestions respecting the various disease-charts, and to Mr. N. A. Humphreys, of the Registrar-General's Office, for much valuable assistance. Amongst many important recommendations put forward to the Health Committee of Salford, we notice that Dr. Tatham strongly urges the establishment without delay of public mortuaries and abattoirs for the improvement of the borough.

THE METRIC SYSTEM IN MEDICINE.

A few months ago (page 374, vol. ii., 1879) we drew attention to the efforts that are being made to introduce in our own country and in the United States of America the general and recognised use of the metric system of weights and measures in all medical and pharmaceutical documents. This system is already very generally made use of on the Continent, and great progress has recently been made towards its general adoption in America. We also alluded to the obvious simplicity and other advantages of the system merely as a numerical method, and pointed out that its general adoption by all nations of scientific importance would certainly tend in some degree to promote the progress of practical therapeutics. It is even hoped that, on the basis of this system, there may be drawn up an international pharmacopœia—the great necessary preliminary to medical and pharmaceutic uniformity. At the International Medical Congress held last autumn at Amsterdam, a resolution was adopted declaring that it was now opportune to make, on the basis of the metric system, an international pharmacopœia for the common use of the nations willing to accept it, and inviting the Pharmaceutical Society of Paris to communicate its project of an international pharmacopœia in order that

it might be printed among the documents of the Congress unless previously issued by the Pharmaceutical Society itself. The following gentlemen were nominated by the Congress as a commission, and charged to present a report on this subject at the next session of the Congress, which is to be held in England in 1881:—MM. Lewis A. Sayre, of New York; Dechambre, of Paris; Ernest Hart, of London; Warlomont, of Brussels; Guye, of Amsterdam; Palasciano, of Naples; E. Seguin, of New York; Gille, of Brussels; and Méhu, of Paris.

FROM ABROAD.

Professor Fournier on Alopecia.

(*Concluded from page* 128.)

5. *Peladic Alopecia.*—This, the *alopecia areata* of Sauvage, and the *porrigo decalvans* of Willan, has given rise to the greatest difference of opinion among pathologists. It is characterised by the rapid appearance of patches or islets of baldness in the midst of a normal head of hair. It is rather rare, scarcely a case a week presenting itself at the St. Louis, and may attack any of the hairy parts of the body. Quite unexpectedly, a white patch of baldness is observed in the midst of the hair in a person in complete health, and other islets are found simultaneously or successively. During the first week or two the patch increases rapidly, reaching the size of a one- or a five-franc piece, and sometimes of the palm of the hand. At the margin of the patch the hairs are thin and fragile, and easily fall. If several neighbouring patches unite, in place of the complete circular or elliptical form, arches result from the fusion of several circles. Occasionally the pelada pursues a serpentine form, producing ribands of baldness. Once seen it will always be recognised. The baldness is complete, not a single hair being discoverable on the smooth, uniform surface, which is soft and velvety to the touch. The surface is absolutely white, sometimes presenting the aspect of ivory. After remaining stationary in this condition for some time, there seems to take place something like an attempt at reproduction of the hair, which would seem to portend an approaching cure. This is, however, illusory, only imperfect hairs being produced, resembling the down of a new-born child; and the stage during which this production takes place is by far the longest. But, after a varying period, true pilous reparation commences. The first hairs fall, and are replaced by others somewhat stronger, which also in their turn fall, to be succeeded by true hairs, which entirely reconstitute the hairy scalp. Thus in this disease there is but a single symptom—absolute baldness, unaccompanied by heat, redness, pain, itching, or any general symptoms. Rapidly produced, after a long period of absolute immobility, its reparation is very prompt. In exceptional cases its duration does not exceed three months, but ordinarily it is longer, lasting from ten months to two years, or even from three to five years. It is a rare exception for it to remain ncurable. In some cases, although cured, the pelada leaves the hair less thick and abundant, and with less colour. Although its prognosis is thus favourable, pelada is during its whole continuance a very repulsive disease, and very prejudicial to its subjects, compelling them to avoid society, as being supposed to be the subjects of contagious disease. The diagnosis is easy. It suffices to observe the character of the baldness, exactly circumscribed patches of absolute calvities being rapidly produced and long persistent in the midst of a normal head of hair. This cannot be confounded with the patches of baldness seen in children after disease of the scalp, nor with the alopecia of convalescence, in which acute disease has preceded the baldness, which is also general, and not so absolute as in pelada. So in syphilitic alopecia there is not the regular and nummular form of pelada, and different regions suffer simultaneously—the pathognomonic contrast of an ivory-like surface in the midst of a thick and intact head of hair not being present. The disease may affect either sex, and persons of all ages, the young, and especially those of a nervous temperament, being most liable. It especially affects well-furnished and exuberant heads of hair. Dr. Fournier is no believer in the contagiousness of the disease, and regards many of the cases adduced in favour of this as founded on faulty diagnosis.

Pelada is an atrophy of the roots of the hair. The bulbs become diminished in size, shrivelled and indurated, and sometimes no bulb remains. The stem is very thin and the hair is colourless. This lesion of the hair was for some time attributed to the existence of a parasitic fungus, which, however, was never demonstrated; and when this view was abandoned it was attempted to be explained by the presence of spores originating in the superficial layers of the epidermis of the cranium. Such spores, however, were shown to be of frequent occurrence in a variety of diseases, and even in the healthy epidermis. The parasitic theory having been abandoned, it has been succeeded by one which regards *alopecia areata* as a lesion of nutrition of the pilous system, produced probably by a disturbance in the innervation—that is, it is a tropho-neurosis. Its sudden appearance and termination resemble what is observed in nervous affections and neuralgias; and we know that pelada occurs in subjects of a nervous temperament, and that depilation is met with as a consequence of nervous lesions, neuralgias, paralyses, and violent emotions. Physiologists observe, too, that when a nerve is divided—the sciatic, for example—a more or less abundant depilation, or at least a partial fall of hairs, ensues. Although this doctrine is as yet devoid of exact demonstration, it may be admitted as a rational presumption. We may conclude, then, that pelada is no longer regarded as a parasitic affection; that it is certainly an atrophic lesion of the pilous system; and that this lesion in all probability is derived from a disturbance of the nervous system.

Treatment.—This has followed the prevalent theory. The advocates of parasitism pursued the parasite with epilatories and parasitic lotions and ointments; and those who adopted the nervous theory sought to arouse the failing vitality of the scalp by means of shaving, stimulating frictions, stimulating topical applications, the administration of quinine and bitters, sulphurous baths and mineral waters, and seaside residence. If we are often powerless and disarmed in face of the disease, we are also often able to cure it and hasten its departure. According to almost general consent, two means succeed well—1. Shaving twice a week, not only the peladic patches, but also over a zone of from one to three centimetres around these. Shaving is a certain stimulant of the vitality of the pilous system, just as a beard frequently shaved becomes stronger and more vigorous. 2. Stimulant frictions; it being of little consequence what stimulating substance is employed. Dr. Laillier, however, recommends the two following formulæ:—(1) Balsam of fioraventi, spirit of camphor, āā 100 grammes; tincture of pyrethrum, liquid ammonia, āā 6 grammes: to be rubbed in for several minutes morning and evening. (2) Tincture of pyrethrum, tincture of pimentum, āā 100 grammes; spirit of camphor 50 grammes; liquid ammonia, 5 or 6 grammes. 3. If these two means fail, the treatment recommended by M. Vidal should be tried—viz., the application of repeated blisters to and a little beyond the bald surface. As a rule the blisters should be at intervals of five or six days. M. Vidal has always obtained a cure in three or four months. 4. M. Hardy relies much on general strengthening treatment by means of iron, gentian, hydrotherapia, etc.

Dr. Beard on Metalloscopy.

In a paper read to the New York Neurological Society (*New York Med. Record*, November 8), Dr. Beard gave an account of a study he had been able to make, during a visit here, on "Nervous Diseases in Europe." It is interesting to observe the opinions of so eminent an authority concerning the investigations of Prof. Charcot, who gave him every opportunity of minutely examining all he was doing in relation to metalloscopy. Dr. Beard arrives at the following conclusions:—

"1. Results far more interesting and informing, both in a physiological and therapeutical sense, have been obtained where the experiments were made in such a way as to make it absolutely certain that the only factor in producing the results was merely *subjective*—the mind of the patient acting upon the body. It is also established that, under any influence or mode of treatment calculated to act on the emotions in any way, it is difficult to exclude this subjective element of error which comes from the mind of the patient operated upon. In his own experiments in mental therapeutics, Dr. Beard believed he had established the following:—By turning the mind of the patient on his body

through any process whatever, as by stating the precise hour when recovery will take place, by applying metals *outside* of the clothing, etc., it is possible to cure permanently, as well as very rapidly, and in some cases instantaneously, cases of long-standing functional nervous disease. Even *organic* structural disease may, in the same way, be temporarily relieved more speedily and satisfactorily than by any of our objective medication. In any physiological or therapeutical experiments or measures, like the application of metals or magnets, or any very imposing proceedings that strike the emotions of ignorant or hysterical women, the presumption is—thousands to one—that the result, whatever that may be, is *subjective*, and not objective: and this presumption must be overthrown before such experiments can be received as science.

"2. On the other hand, the recent discoveries and inventions, of which the telephone, the phonograph, the audiometer are types and representatives, have proved that great results can come from changes in matter very minute and out of the range of the senses. It is also well known that a magnet can stop a watch, elongate an iron rod, and make music in it. These results are so far in favour of the claims of Burcq, Charcot, and others in regard to metals, magnets, and solenoids.

"3. The first presumptions can only be overcome by a series of experiments on different patients, under different circumstances and at different times, in which all the six sources of error that apply to all the experiments with living human beings have been carefully eliminated. These six sources of error are the following—(1) Unconscious deception on the part of the subject experimented on; (2) intentional deception on the part of the subject; (3) intentional collusion of other parties; (4) unintentional collusion of other parties; (5) chances and coincidences; (6) phenomena of involuntary life, the mind of the subject operating upon the body and producing results. To eliminate these errors, the subject experimented on must be *deceived*.

"4. The reports of experiments made by Burcq and Charcot as they were *first* made, and the replies to criticisms upon them, contained no evidence whatever that these sources of error had been eliminated. It is right, and scientific, and necessary, therefore, that we should assume that the presumption that the results were subjective had not been overcome. Dr. Beard had nothing to recall or modify of his criticisms on these experiments in his pamphlet on that subject.

"5. There is, however, *now* evidence of an important character that the more recent experiments of Charcot and others have been made in such a way as to eliminate these sources of error; and if the statements of Charcot made to Dr. Beard are accepted, results have been obtained which, some of the time at least, are objective, and we have so far obtained an addition to physiological science. Similar results as those reported by Charcot in hysterical conditions have been obtained by Dr. McCall Anderson, of Glasgow, and, according to his own report, the elements of error were properly eliminated by the use of *false magnets*. When he used false magnets no effects followed; Charcot says the same.

"6. The subject has therefore reached a stage when it may properly receive the attention of experts in this department. It is an open question waiting to be closed in one way or the other. No experiments in this department are worth anything unless the subject is all the time deceived. The public exhibitions of Charcot prove nothing.

"7. These questions, however settled, have a physiological more than a therapeutical interest. Charcot has abandoned metal-therapeutics (so-called), and regards his experiments merely as physiological curiosities. It is, however, not impossible that we shall find in these processes an addition of a certain value—perhaps a greater value than is now apparent—for relieving hysteria, neurasthenia, and allied states."

Martin's Bandage.

At a meeting of the Philadelphia County Medical Society (*Phil. Med. Times*, December 6), Dr. Charles Thomas read a paper upon the treatment of ulcers of the leg by Dr. Martin's india-rubber bandage, exhibiting at the same time two cases to show the facility of its application by the patients themselves. He observed that although this bandage had already, since its introduction about two years since, taken high rank in mechanical therapeutics, and is widely known, it has not, in his opinion, received all the attention it deserves, and is not employed so frequently, or rather so exclusively, as the accumulating evidence of its great value would suggest. After relating some striking examples of its great utility, he terminated his paper with the following observations:—

"The quality and size of the bandage are of prime importance. If too thin, it is inefficient; and if too thick or hard, it becomes a source of irritation. As to dimensions, a four-yard bandage, two inches and a half wide, will answer perfectly for all cases below the knee. The bandages are now furnished at a price so low that they are practically within the reach of the poorest. And then they are so durable as to last for years without deterioration. In applying the bandage no reversed turns are made, and I think it best to *begin over the sore*, wherever located, letting the bandage rest flatly upon it, afterwards making the adaptation to the rest of the leg as best one may. This being done while the patient is in bed, before rising in the morning, the bandage may be applied just so strongly as not to slip down, for when the patient assumes the erect posture the increased flow of blood to the part will induce the proper amount of pressure and tightness. Care should be taken to avoid the contact of oily matters with the rubber, and it should be washed every night and hung up to dry. The ulcer also ought to be kept scrupulously clean. Dr. Martin recommends that no application be used except the bandage, but I am convinced that the interposition of a soft bit of muslin or linen between it and the sore adds greatly to the comfort of the patient, and, in some cases, to the value of the treatment. My own experience is, that this method is as applicable to acute as to chronic cases, and that inflammatory conditions are particularly amenable to treatment by it, provided that the simple expedient here mentioned be adopted. In conclusion, it is not too much to say that the rubber bandage, in its application to the treatment of leg-ulcer, constitutes one of the most valuable and important contributions made to surgery in recent times. Its cost is but slight; it is easily applied by the patient himself, who is able to walk at once and follow all ordinary avocations throughout the treatment; and I believe it is more efficient than any or all other means heretofore used for the relief of this most disabling malady."

At the discussion which ensued, Dr. Shoemaker said that he had used the bandage both in leg-ulcers and in eczema. In skin disorders he recommended primary depletion by punctures or scarification and constitutional treatment. He followed Dr. Thomas's method of placing a piece of linen over the ulcer to protect it from the bandage. In a few cases the bandage produced erythema, and had to be discontinued. Dr. Lee suggested that this might be due to not having used a pure rubber bandage, to which Dr. Martin had called attention in a recent letter published in England. Dr. Atkinson stated that he had applied it to a case of swelling following gout in the hand. A small bandage not being attainable, some strips cut off of some pure sheet rubber had proved very serviceable. Dr. Levis recommended the bandage for the persistent swelling which follows a fracture, due to disturbance of the circulation. All surgeons have felt the difficulty of getting patients on their feet after a bad fracture, and they will find great aid from the bandage. Dr. Blackwood, while praising the bandage as the best means ever contrived for the cure of ulcers and varicose veins, had, like Dr. Shoemaker, sometimes found it produce irritation; but this ceased if the use of the bandage was persisted in. He abandoned the use of all applications, powders, etc., and followed Dr. Martin's directions. Some used vulcanised rubber, but he believed that this induced irritation. Dr. Collins mentioned a case where a pure rubber bandage caused so much sweating and irritation that it could only be worn for a very short time at first; but by persevering with it the patient was at last able to wear it for twelve hours. Dr. Thomas, in reply, observed that "he had noticed erythema and irritation occurring at first, but the parts afterwards became accustomed to the bandage. It is remarkable to observe the amount of epidermis, or epithelial scales, thrown off during the early use of the bandage or during the first few days. The bandage must not be too tightly applied at first. He generally ordered the limb to be bathed with an alum wash at bed-time. The bandage should also be washed each night with Castile soap and water, and hung up to dry. Applications may be made to the ulcer during the night if desired."

REVIEWS.

The Medical and Surgical History of the War of the Rebellion. Part II., Vol. I.—*Medical History.* Being the Second Medical Volume. Prepared under the direction of Joseph K. Barnes, Surgeon-General, United States Army. By Joseph Janvier Woodward, Surgeon, United States Army. Cloth, 4to. Pp. 869. Washington: Government Printing-Office. 1879.

This very valuable volume is a continuation of the grand Medical and Surgical History of the War of the Rebellion, and treats only of the alvine fluxes; the consideration of the fevers and the other chief camp diseases being reserved for a third medical volume, which it is intended shall complete the Medical History. The first section of the volume before us is statistical, and gives a fearful picture of the ravages made by acute diarrhœa and chronic diarrhœa, and by acute and chronic dysentery among the troops. These disorders occurred with more frequency, we are told, and produced more sickness and mortality, than any other form of disease. They appeared at the very beginning of the war, attacking new regiments before they were fully organised, and soon acquiring a formidable character. "Soon no army could move without leaving behind it a host of the victims. They crowded the ambulance-trains, the railroad-cars, the steamboats. In the general hospitals they were often more numerous than the sick from all other diseases, and rivalled the wounded in multitude. They abounded in the convalescent camps, and formed a large proportion of those discharged the service for disability." And for many months after the cessation of the war, and the greater part of the troops had returned to their homes, deaths from chronic diarrhœa and dysentery contracted in the service continued to be of frequent occurrence among them. The total number of cases of these diseases recorded among white and coloured troops comes up to 1,739,135, with 44,558 deaths. But even these figures certainly do not fully represent the sickness and loss caused by the alvine fluxes; for large numbers of cases of death were simply recorded without any mention of the causes. Thus the total number of deaths among the white troops only, in which the cause of the disease is specified, is 129,386; but it is known that at least 171,704 deaths occurred from disease. As might be expected, these diseases —intestinal fluxes—were still more common and more fatal among the prisoners of war, held by either the Confederates or the Federals, than among the troops on active service. The hospital register of the notorious prison at Andersonville shows that the cases of diarrhœa and dysentery admitted into hospital between February 24, 1864, and April 17, 1865, were 7352, and of these no fewer than 5605 proved fatal. Such a fearful rate of mortality was happily exceptional, and due to the conditions of the prison and the diet. The place was an enclosed piece of ground consisting at first of about seventeen acres, and later of about twenty-four; and in this space were confined at the beginning 10,000, and at the end of July nearly 30,000 prisoners. Through the middle flowed a sluggish stream of water about six feet in width, bordered by a low swamp, which occupied six acres; into the stream and swamp all the drainage of the camp passed, and the stream was at the same time the chief source of the water-supply. No shelter was supplied, except for the hospital patients. The rations furnished were poor in quality, unbaked corn-meal being chiefly used instead of flour, and insufficient in quantity. A scorbutic condition was consequently almost universal, and the hospital accommodations were most meagre and inadequate. In the case of the Confederate prisoners in the custody of the Federal authorities, diarrhœa and dysentery were far less fatal, but even among them they caused about one-third of all the deaths from disease.

The second and third sections of the work contain reports and extracts from reports by medical officers, and notes of the morbid appearances observed, dealing with some 900 cases. The fourth, and last, section, which occupies nearly 600 pages of the work, is devoted to the symptoms, morbid anatomy, causes, and treatment of diarrhœa and dysentery. Surgeon Woodward groups the manifold varieties of these diseases under four heads: 1. *Acute Diarrhœa*, including the cases due to inflammation of the intestinal mucous membrane, as well as those in which the intestinal lesion does not progress beyond simple irritation. 2. *Acute Dysentery*, including both the simple inflammatory and the diphtheritic forms. 3. *Chronic Dysentery*, under which head the cases reported during the war as chronic diarrhœa are also included, whether tenesmus was present or not. 4. *Diarhœa connected with Tubercular Ulceration of the Intestines.* This part is enriched by verified references to all the more important opinions and experience to be found by a careful study of the literature of the fluxes, and is the outcome of an immense expenditure of time and labour. It is obvious that it would be quite impossible to give anything like a review of it in the space at our command. It is a mine of observation, experience, and reading. We are much tempted to give some quotations from the exhaustive and valuable consideration of the value of different modes of treatment, but it is not possible to do so with a fulness that would do justice to Surgeon Woodward. We will note, however, that he is of opinion that the use of opium and its preparations should be avoided as far as possible in the treatment of dysentery and diarrhœa, acute or chronic; and that he would limit the use of ipecacuanha to vigorous patients suffering with acute catarrhal diarrhœa or dysentery, or with the preliminary catarrhal stage of diphtheritic dysentery. It may, he thinks, be occasionally useful in the chronic fluxes, but only if there be no ulceration, or if the ulcers are of very moderate extent. Whenever there is conclusive evidence of the existence of extensive intestinal lesion, and in all exhausted and debilitated patients, its use is contraindicated. He speaks highly of the value of the subnitrate of bismuth in painless diarrhœa after the use of evacuants, and in chronic fluxes; and he warns his readers against trifling with these affections by giving any of the soluble preparations of the metal.

The work is very complete, and, like all these Government productions, is superbly brought out. The illustrations, of which there are nearly a hundred, are excellent. The photographs, of which there are many, are unusually clear and good; and photo-micrography and the heliotype process have been employed to excellent purpose. The type used is exquisitely sharp and clear, and the paper is worthy of an *édition de luxe*. And the volume is supplied with four indexes: one of "Subjects," one of "Cases," one of "the Medical Officers and others" who have contributed cases or observations, and fourth, a very copious one, of the Authors cited.

Chloral in Vomiting of Pregnancy.—Dr. Herzberg, of the Berlin Charité, has found chloral of great utility in vomiting from any cause, and in some affections, as gastralgia, rapidly effective. In this paper he wishes to call attention to its great efficacy in vomiting of the early months of pregnancy. He always uses this formula:—Chloral 1½, water 100, and syrup of orange-peel 20 parts, giving a spoonful every two hours. A few spoonfuls suffice to stop the vomiting for a long time. If after some days it returns again, a recurrence to the remedy entirely removes the evil.—*Berlin. Klin. Woch.*, December 8.

The Mecca Pilgrimage.—This pilgrimage, which annually gives rise to so much uneasiness among European governments, has just terminated under favourable circumstances. At the meeting of pilgrims at Mount Ararat on November 24 not a single death arose from epidemic disease. Forty-two thousand pilgrims passed by December 14 to Djeddah, and 20,000 to Suez on the 12th of the same month —all being in good health. On January 4 several thousand disembarked safe and sound at Zambo. These satisfactory results are especially due to the fact that the pilgrimage has this year coincided with the cold season; but when it again finds itself coinciding (the period advancing a month each year) with warm weather, danger of epidemics will be greater than ever. None of the precautions agreed upon have been executed, and the valley of Mina, wherein the pilgrims pass three entire days in order to make their sacrifices, is a true cloaca, in which are accumulated the remains of animals and filth of every kind. The holy city itself, Mecca, is far from presenting a desirable sanitary condition. Its streets are dirty, and the approaches to the Grand Mosque are so befouled that the pilgrims who pass around it, according to the accustomed rite, plug their nostrils with a kind of perfumed wadding.—*Union Médicale* January 24.

GENERAL CORRESPONDENCE.

THE UNIVERSITY OF LONDON.

[To the Editor of the Medical Times and Gazette.]

SIR,—Your leading article last week on "The University of London" seems to me worthy of the earnest attention of its governing body.

It will, I think, be highly regrettable that "some other University or Universities" should "ere long be created to meet more fully the wants of the profession in England"; and yet there is no other course to adopt should the present University persevere in its refusal to make its degree somewhat more accessible than at present.

The conjoint scheme will probably one day become law, and I would suggest that all the present titles of the existing Colleges should be merged into a degree of Doctor in Medicine, Surgery, and Obstetrics. This would meet the difficulty, and would not in any way interfere with the present Universities, whose degrees are "distinctions and rewards" rather than licences to practise medicine and surgery. This alternative, while it would meet the present difficulty, would not, in my opinion, be so generally satisfactory as a relaxation of some of the rules of our present London University. Might not some such scheme as the following be carried out?

Qualified men, whose names have been on the Register, say, five years, to be allowed to present themselves for the degrees in medicine without further restriction. Such candidates to be ineligible for the honours examinations; but, on the other hand, to be allowed to proceed to a degree as quickly as they can.

It is well known that a degree is most useful just at the outset of one's career. Once established in practice, it matters nothing to the lay public whether a practitioner is or is not M.D., and still less where the M.D. was obtained. The degree is chiefly valuable in the "Directory," where we always look when we want to know what a man has done. Degrees granted in the way I propose would carry their *imprimatur* along with them, and by contrast would tend to increase the value of the "honours" which some men are able to tack to their ordinary degree.

The establishment of such a rule, besides facilitating graduation in medicine, would tend to promote the interests of the profession; for I feel sure that many men would then graduate who, from no fault of their own, had been thwarted in obtaining a degree in consequence of an unsuitable, rather than of a defective, preliminary education. After registering and completing their house-surgeoncy or house-physiciancy at their own or some other hospital, they would re-apply themselves to their studies; and in bringing personal experience to bear on these studies at a more mature age, they would ultimately make better practitioners than had they graduated when quite young, and thus lost the greatest inducement to close and continued study.

London, February 2. I am, &c., SOCIUS.

THE APOTHECARIES' COMPANY AS A LICENSING BODY.

[To the Editor of the Medical Times and Gazette.]

SIR,—In the last number of the *Medical Times and Gazette* you call attention to the fact that, of 128 candidates for the diploma of the College of Surgeons, twenty-eight held the licence of the Apothecaries' Company.

I look upon this fact as one much to be regretted—considering that the position of that Company as a licensing body is an utter anomaly, and one that ought to be removed at the earliest possible period.

It is no doubt true that in its time it has done good service; but that is no sufficient plea for the continuance of what must at the present day be looked upon as nothing less than an evil.

In the eyes of foreigners what an absurdity must it appear that a large proportion of English practitioners are attached to a trading company, whilst the licence of the London College of Physicians is open to them, to say nothing of other bodies!

In any new scheme for regulating the profession it would be well that this abuse should be removed, and the Company relegated to its natural position as a mercantile body; or at most, that it should be made subsidiary to the other licensing bodies, by having deputed to it the duty of examination in the materia medica and pharmacy. I am, &c.,

February 3. F.R.C.S.

[Of course it must be understood that "F.R.C.S." writes entirely on his own authority, and that his opinions are his own.—ED. *Med. Times and Gaz.*]

ABUSE OF NARCOTICS AND SALE OF POISONS.

LETTER FROM MR. T. COMFIELD.

[To the Editor of the Medical Times and Gazette]

SIR,—Believing that the following statement relative to the powers possessed by the Council of the Pharmaceutical Society will be of special interest to the profession at the present moment, I send it to you, although the substance of this letter was published last week in the *Standard* and other daily papers.

The Council has power under Section 2 of the Pharmacy Act, 1868, from time to time to add to the list of poisons scheduled in the Act, and in 1869 added thereto, among other things, "preparations of morphia," and about two years ago added "hydrate of chloral and its preparations." And by Section 17 of the Act a penalty of £5 (which does not go to the Society) is incurred by selling any such poison when it is not labelled "poison," except when contained in any medicine supplied by a medical practitioner or in any medicine dispensed by a registered chemist.

Of course, had the words "preparations *containing* morphia" been used instead of "preparations *of* morphia," chlorodyne (which always contains morphia) would clearly have been within the Act, and must have been labelled "poison." I believe I may fairly assume that all medical practitioners who have investigated the matter consider that chlorodyne is practically a "preparation of morphia"; yet a court of law might hold that it was not legally a "preparation of morphia," seeing that it contains prussic acid (which is in the list of poisons) and other things as well as morphia.

What I have written concerning chlorodyne applies equally to other narcotics—*e.g.*, to preparations containing chloral, to soothing and teething powders; and the principle applies to scores of patent medicines and other preparations containing poisons which, sold in their own name, are poisons within the Act, but when disguised in name and taste or appearance are supposed to be saleable without being labelled "poison."

The remedy for this absurd and unsatisfactory state of matters is plain and simple enough. Let the Council of the Pharmaceutical Society add to the list of poisons—"All preparations containing any poison, except chloroform, within the Pharmacy Act, 1868," and—"All preparations containing by measure more than 1 per cent. of chloroform" (chloroform itself is now a poison within the Act). Then it will be clearly illegal to sell any of the poisons I refer to without labelling them so, however much they may be disguised in name, taste, and appearance, which obviously only increases the danger of accidental poisoning.

Your readers must not suppose that anything I have stated here is new to the Council of the Pharmaceutical Society, or that they will act in the manner indicated unless the pressure of public opinion or some other pressure is brought to bear upon them.

The fact that narcotics are largely sold without being labelled "poison" (usually as a patent medicine), I believe to be one of the easily preventable causes of "the abuse of narcotics." For a natural result of the sale of narcotics without being labelled "poison" is that only too often the knowledge that poison is being taken, if it comes at all, only comes after the narcotic has ensnared its victim. But the number of infants slowly poisoned by narcotics in the form of soothing and teething powders, and soothing syrups, is the most serious "abuse of narcotics" of any I know of; and I believe comparatively few mothers would be so wickedly foolish as to give such things if they were labelled "poison."

I am, &c., THOS. COMFIELD, L.R.C.P.

14, Caistor-villas, Stamford-hill, N., February 3.

THE POSTAL MICROSCOPICAL SOCIETY.

Letter from Dr. C. P. Coombs.

[To the Editor of the Medical Times and Gazette.]

Sir,—Thanks to your insertion of letters on the subject, the effort made by the Postal Microscopical Society to establish a separate histo-pathological section has been most successful, and a number of boxes have been placed in circulation. Most of the slides have been of a very high order; some sent by a professional mounter, and others the work of amateurs—medical men—are triumphs of section-cutting, injecting, staining, etc., and, being accompanied by accounts of the cases from which they were taken, are thus made exceedingly instructive. It is a great pity that slides illustrating rare forms of disease, or original investigations into the causes of morbid action, should be seen by only the comparatively small number of medical men who attend the meetings of societies; and it will be a great boon to the profession generally if those who have such slides to exhibit would place them at the disposal of this Society, that they may be seen by any of us who are interested in microscopy. The boxes have been gradually improved, so that it is almost impossible for properly mounted slides to be injured in transit. The annual subscription is very small, viz., 5s. Any information about the Society will be gladly given by the Hon. Sec., Mr. Alfred Allen, 1, Cambridge-place, Bath, or by

Yours, &c.,

January 30. C. P. Coombs, M.D. Lond.

Amenities of American Letters.—As some of our readers are aware, that enterprising gentleman Dr. L. P. Yandell, of Louisville, favoured Europe with a visit, whilst he tickled the ears of his countrymen with fancy sketches of the men and things he there encountered. Dr. Yandell has done this before, we believe—not always to the delight of his entertainers in this country. However, in the course of his wanderings he came to Paris, whither all good Americans go when they die—some of them before death—and he saw Prof. Charcot. According to Dr. Yandell's story, Charcot roundly accused one of Dr. Yandell's countrymen of reproducing certain drawings published by Charcot in his book on nervous diseases, without any acknowledgment of their origin. This seems to have been repeated in a New York paper, the *Sun*, and Dr. Hammond's name mentioned as the plagiarist in question. Thereupon Dr. Hammond girded up his loins and wrote to Charcot *such* a letter! We need not quote this letter in full; suffice it to say that Dr. Hammond refutes the statement made by Dr. Yandell as regards certain figures in his book, given according to number—a refutation fully endorsed by Charcot himself. The part of the letter which we desire to lay before our readers we quote for a very different purpose, inasmuch as it affords one of the best examples that we have recently seen of the *tu quoque* rather than of that charity described and recommended by the Apostle. Dr. Hammond ends his letter thus:—"It therefore appears to me—and I think every unprejudiced person will agree with me—that in all these instances (and the same is true of every other that occurs in my book) I have given all proper credit: certainly as much as you have given to M. Meynert and to M. Duret for the cuts you have taken from them and inserted in your valuable 'Leçons sur les Localisations,' etc., and more than you have awarded to M. Ecker, whose Figures 2, 3, and 4 you have transformed (without other alterations) into Figs. 12, 13, and 14, without, so far as I can find, a word of acknowledgment." But Charcot's politeness failed him not; he attributed the whole misunderstanding to his imperfect knowledge of the English language.

The Riberi Prize.—The Royal Academy of Medicine of Turin announces that the quinquennial Riberi Prize of 20,000 lire (£800) will be open to competitors till Dec. 30, 1881. The subject is "The Physico-Pathology of the Blood." Printed as well as manuscript works in the Latin, Italian, or French languages may compete; but the printed works must have been published since 1876, and two copies must be deposited at the Academy. The manuscripts sent in remain the property of the Academy, but the authors are allowed to make abstracts of them.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

Friday. January 23.

E. H. Greenhow, M.D., President, in the Chair.

A Case of Subastragaloid Dislocation, in which Reduction had been effected by a somewhat Novel Method, and a Satisfactory Result obtained.

Mr. Pick read this paper. The case was one of ordinary subastragaloid dislocation, where the whole of the tarsal bones, with the exception of the astragalus, were displaced outwards from this bone, which remained *in situ*, in contact with the tibia and fibula. All the ordinary methods, by manipulation, pressure, extension, and rotation, were tried, after division of the tendo Achillis, without success; and in consultation it was determined to make one more attempt at reduction, and, failing this, to perform excision of the astragalus, as the foot would clearly be of no use to the patient as it was, and the skin over the prominent head of the bone threatened shortly to give way. At Mr. Henry Lee's suggestion, the following plan was adopted:—The middle of a bandage was twisted in a clove-hitch, and passed round the foot just behind the heads of the metatarsal bones; the two ends of the bandage were then tied and passed over the operator's shoulders, the knee of the surgeon at the same time being placed in front of the lower extremity of the tibia. Considerable extension in a direction forwards was then made, and the foot at the same time moved from side to side, as far as the amount of tension would allow. After about a quarter of a minute's extension in this way, the bones quietly slipped into their places. The patient made an uninterrupted recovery. Mr. Pick stated that he believed the difficulty in reduction in this case was due to the posterior inferior margin of the astragalus being wedged in the interosseous groove between the articular facets on the upper surface of the os calcis, and at the same time the constricted neck of the astragalus locked by the sharp posterior margin of the scaphoid bone. It was taking this view of the case which induced Mr. Henry Lee to propose the plan of attempting reduction by making extension directly *forwards*, so as to unlock the bones, and cause the head of the astragalus to recede into the cup-shaped posterior surface of the scaphoid.

Mr. Bryant said that in a case which he looked upon as subastragaloid dislocation he had carefully considered the position of the foot, and he had come to similar conclusions with Mr. Pick. These dislocations might easily be described as dislocations of the astragalus. The mode of reduction was very ingenious, and the device would do well to be followed. It was to be regretted that no drawing of the displaced foot had been made, as the eversion had apparently been extreme.

Mr. Henry Lee had very little to add to Mr. Pick's description. Such injuries required most careful consideration, as amputation was too frequently had recourse to in them. In a case under the care of the late Mr. Hancock only parallel extension had been employed; but the foot should also be extended forward, the bandage being applied along the inner side of the scaphoid.

Mr. J. Adams said that there was a dried specimen in the Museum of the London Hospital, showing the foot turned inwards and the astragalus displaced outwards.

A Case of Gunshot Wound.

Dr. Hewan (for Mr. E. Adams) read a paper on this case. "In 1862, A. B., ship's carpenter, aged about thirty-seven years, a tall, stout man, of temperate habits, was shot by a ship's captain in a row on board a palm oil trading ship, at anchor in a river on the West Coast of Africa. The bullet was fired from a large Colt's revolver at a distance of about five yards, at 10 p.m. Immediately the report was heard the carpenter gave a loud shriek, clasped his hands over his breast, and rushed across the deck into the forecastle, exclaiming, 'I'm shot; fetch the doctor.' I was standing close to the captain at the moment of the occurrence, and instantly followed the wounded man. He was lying on the floor of the forecastle deck, and as soon as he saw me he said he was done for, and felt in a dying state. Collapse

came on rapidly, although there was little or almost no external hæmorrhage. I made an examination of the chest, and found the cntrance-wound of bullet above the left nipple, between the third and fourth ribs. A bed was prepared on the main deck, and to this he was removed as soon as he had taken a dose of brandy and laudanum. The surgeon of a neighbouring vessel had meantime been sent for, and on his arrival I made a careful search for the bullet. It was found on the inner edge of the scapula, at a point opposite to, but on a somewhat lower level than, the point of entrance, projecting under the skin of the back, which was extremely thick. There was a large patch of emphysema all round it extending up to the level of the shoulder-joint and towards the spine. As we turned the patient over, he began to cough, and brought up a large quantity of blood, clear and frothy, evidently from a pulmonary vessel. It was decided to remove the bullet, and this was done by means of a tolerably long incision, sufficient to admit two fingers. The operation was performed rapidly and with little difficulty. The conical ball of lead, grooved at the tip, as if it, had struck a hard substance in its passage, was extracted. The operation wound was treated as a simple incised one, with one suture and adhesive strapping. The wound of entrance was covered with cold water dressing. There was grave collapse, but the patient was well watched, and encouraged by the constant presence of the doctor. During the first twenty-four hours brandy (with laudanum) was given pretty freely, but after this time very sparingly. The laudanum was continued for a week or ten days. It appeared to answer admirably, soothing the patient into a state of happy indifference and freedom from pain and anxiety. The blood from the lungs gradually diminished; there was scarcely any direct pain after the first day or two, and at the end of a fortnight the patient was in a condition of absolute safety. It should be noted that he was well fed with soup and mutton-tea, and was allowed to drink lots of cold water. At the cnd of about six weeks he was transferred to a homeward-bound ship, and arrived safe and well in Liverpool. I heard of him three years later as being alive, well, and able to make long sea-voyages as well as any man. I offer no comment on this case further than to say the treatment was the best that could be adopted under the circumstances. It was very rough, very unscientific—very successful."

Dr. C. T. Williams was surprised that the heart was not injured. The case was even more remarkable than that which he had narrated to the Society.

Dr. F. Robinson said that many similar cases occurred in the Crimea. In the case of one, a lieutenant who was shot through the lung, rest and diet brought about a recovery. Subsequently to his return to England, however, the patient died through undue indulgence in fruit.

Mr. H. Lee thought the "rough" treatment would compare favourably with the "gentle" management of other days. He thought it was impossible to adopt antiseptic precautions in such cases.

Mr. R. Parker said there were several cases of this kind during the Franco-German war, a good many ending in recovery. The rapid flight of the bullet nowadays had a tendency to produce incised rather than contused wounds, and this favoured recovery.

Dr. Mahomed related the case of a man who came into St. Mary's Hospital with a bullet-wound of the chest, and the pleura apparently filled with blood. The man ultimately recovered without operative interference, though tapping had been spoken of.

Dr. Robinson did not remember any case of tapping in such injury.

Dr. Hewan, in reply, said the ship at the time was not at sea, but at anchor off a malarious coast. He thought the recovery due to good management.

A Case of Pyelitis—Discharge of Pus—Incision in the Loins—Recovery.

Dr. S. O. Habershon read a paper on the above case. A. P., aged twenty-eight, was admitted into Guy's Hospital under Dr. Habershon's care January 29, 1879. He was a delicate-looking man; by trade a carman. His mother and four brothers were stated to have died from phthisis. Four months before admission he first noticed blood in his urine, and he then experienced pain at the end of the penis during micturition. For some time previously he had had pain in the left arm, left side, and thigh, extending down the inner part of the limb to the knee. The blood passed was mixed with the urine, and gave to it the appearance of light-red port wine. He did not pass any clots. About a month after passing blood he noticed a swelling in his left loin, which increased in size till it reached the size of a goose's egg. The severity of the pain compelled him to remain in bed. He stated that one night the swelling burst, it suddenly disappeared, and that he then passed about half a pint of pus with his urine, and continued passing a little pus at the end of micturition for three or four weeks. The urine was of a yellowish colour. During the formation of the swelling the bowels were confined for a fortnight, but afterwards diarrhœa came on. On admission the patient appeared ill and distressed, his sleep was disturbed, he rested on his back, but movement gave pain; there was occasional nausea, the tongue was red and dry, the bowels were regular, the abdomen was rigid, especially on the left side, and he complained of pain when the slightest pressure was made on the left loin. There was dulness on percussion in the left lumbar region from the eighth rib to the crest of the ilium, but the dulness did not reach to the middle line. There was also fulness at the part, but no defined tumour could be made out. The voice was weak; respiration harsh at the right apex; no dulness at the apices of the lungs, but there was dulness at the left base, and there was absence there of breath-sounds; respirations 36 per minute; the pulse was increased in frequency, and feeble; the urine was clear, specific gravity 1022, and free from pus, blood, albumen, sugar, phosphates; it contained a few squamous epithelial casts. The evening temperature was 102°. Morphia was given to relieve the pain. It was thought desirable, from the distressed and feverish state of the patient, to relieve the lumbar swelling; it was believed to be disease of the pelvis of the left kidney, and was thought to be strumous disease setting up suppuration, but it was doubtful whether there had been tubercular disease at the commencement, and the symptoms did not indicate calculus. On February 8 a fine trocar and canula were introduced into the swelling through the left loin, about midway between the ribs and the crest of the ilium; six ounces of a clear light-green fluid were drawn off, and these were followed by about two ounces of pus. There was a fœtid smell; The fluid was of specific gravity 1025; when boiled it became nearly solid, but it contained no urea nor uric acid, no hydatid, but pus-cells and fibrin. On the 10th there was a good deal of perspiration. The dulness was less extensive, and there was less febrile excitement. On February 14 the temperature was high, the abdomen flaccid; the tumour was distinctly felt. Mr. Davies-Colley made an incision under carbolic acid spray in the left loin, about three inches in length, just beyond the edge of the quadratus lumborum muscle. A firm, thick-walled, fluctuating tumour was found; and pus having escaped when a grooved needle was introduced, Mr. Colley made a larger opening, and nearly two pints of pus, mixed with a little blood, were discharged. The abscess extended beneath the ribs to about the eighth rib, and downwards about two inches below the crest of the ilium forward to the edge of the rectus muscle; the walls of the sac were lined with calcareous material, but no calculus was felt. A tube eight inches in length was introduced, and the wound dressed with gauze in the antiseptic manner. The fluid gave a slight effervescence with the hypobromide solution, but no crystals of nitrate of urea could be obtained by nitric acid. Quinine medicine was continued. The improvement of the patient was uniform: the pain and perspirations ceased, and the discharge lessened. On the 27th three inches of the drainage-tube were removed. At the base of the left lung there was still slight bronchophony and prolonged expiratory murmur. On March 21 the patient was feverish, temperature 102°. The drainage-tube had been removed, and the wound had healed. Mr. Colley again opened the wound and evacuated half an ounce of pus. From that time he continued to improve. The discharge gradually lessened, but he remained in the hospital till May 15. The sinus was still kept open, and he was directed to come to the hospital every third day to have the side dressed. The family history and the appearance of this patient suggested the probability of tubercular disease or caseous degeneration, and the discharge of blood directed attention to the kidneys. It was less easy to give a decided opinion as to the cause of the hæmorrhage. The absence of thoracic

disease removed passive congestion from the causes of the complaint. There was no history of any blow or fall, and no proof of cancerous disease. The pain at the end of the penis and during micturition was indicative of vesical irritation as from a calculus, but these symptoms were only transient, and it was thought probable that if any portion of gravel had passed into the bladder, it had been quickly discharged. Two other modes of explanation suggested themselves to account for the hæmaturia and subsequent discharge of pus and enlargement of the kidney, for the swelling in the left loin was regarded (and correctly so) as a distended pelvis of the kidney: the one was that a calculus had blocked up the ureter, and had led to distension and suppuration in the pelvis of the kidney; and the other was that tubercular disease, or caseous inflammation of the gland, had been followed by chronic suppurative pyelitis. The roughened semi-calcareous state of the diseased pelvis of the kidney when the finger was passed in through the incision showed that this latter supposition was probably correct, and no calculus could be felt. The patient was very ill on admission; he was feverish, and in constant pain and distress; there was hectic, and his strength was rapidly failing, and nothing could be more marked than the relief and almost daily improvement after the re-evacuation had been made by Mr. Colley. If the operation had been postponed I have no doubt the man would soon have become exhausted; and the operation might, I believe, be frequently resorted to in these cases with benefit, and with the saving of life. It would be well if the whole gland could be safely removed, for it had become the mere cyst of a chronic abscess, and it formed a persistent source of irritation. From the large size of the abscess it may be doubted whether the suppuration was external to the gland; but it is well known that the pelvis of the kidney may attain to enormous proportions. Some years ago a man was under my care in the hospital, who, from the age of sixteen or seventeen, suffered from periodic discharges of pus from the bladder, the discharge of pus being preceded by the formation of a large projecting sac extending from the ribs to the iliac fossa on the right side. It was found after death that a calculus blocked up the ureter on the right side, and that pus collected in the distended pelvis of the kidney, so as to reach several pints in quantity; when the distension became excessive there was a sudden discharge, and the swelling subsided: the distension of the ureter had become greater than the obstructing calculus, and the passage was then free. These attacks recurred, sometimes with intervals of several years, and the patient attained the age of sixty-four years. He died in Guy's from cancerous disease at the upper part of the remains of the kidney.

Dr. N. Davies-Colley: I have but little to add to Dr. Habershon's report. The character of the abscess-cavity seemed to me to indicate that it was formed by the dilated pelvis of the kidney. It consisted of a number of smooth-walled compartments freely communicating with each other, and partially separated by ridges, which were most of them encrusted with a calcareous deposit. With the exception of a short period during which pyrexia returned from the too early removal of the tube, the patient's progress to recovery was steady. He wore the tube for a month after he left the hospital, on May 15. The discharge at first increased, probably from the discontinuance of the antiseptic treatment. It then gradually diminished, and finally ceased altogether at the end of October. His general health was good, but he had to be careful about his diet. Meat made him sick, so that he lived chiefly upon bread and milk. On November 5, when I last saw him, the wound had been quite healed for two weeks, and there were no signs of any abdominal tumour, although I examined him carefully in the recumbent posture.

(To be continued.)

Medical and Medico-Legal Fees.—The *Gazette des Hopitaux* (January 29) vouches for the exactitude of the following:—A surgeon demanded a fee of 100 francs for having passed the night at the bedside of a rich patient, who, when he had recovered, refused payment. An action was brought, and the three experts named by the tribunal, after having passed half an hour in considering the justice of the claim, while declaring that 100 francs was too high a charge for one night, demanded 200 francs each as their fees—*i.e.*, a total of 600 francs,—which the surgeon will have to pay!

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, January 27.

John E. Erichsen, F.R.C.S., F.R.S., President, in the Chair.

Case of Aneurism of the Subclavian Artery treated by Amputation at the Shoulder-Joint and the Introduction of Needles into the Sac.

Mr. Christopher Heath contributed the above. After reviewing the recorded cases of amputation at the shoulder-joint for aneurism of the subclavian artery, the author narrated his case. A man, aged forty-eight, subject to fits and paralysed on the left side, was knocked down in the street on September 12, 1878, and sustained a comminuted simple fracture of the left clavicle and had several ribs broken, including, as was found afterwards, the first rib. The patient was admitted into University College Hospital for treatment, and made an out-patient September 29. He was re-admitted on October 31, on account of a pulsating swelling occupying the posterior triangle on the left side, which proved to be an aneurism of the third part of the subclavian artery. It being impossible to compress the artery between the heart and the aneurism, which rapidly increased in size, Mr. Heath amputated the paralysed arm at the shoulder-joint on November 4 with antiseptic precautions and tying the axillary artery with a catgut ligature. There was secondary hæmorrhage to the extent of four ounces ten days after, when the antiseptic dressings were necessarily abandoned. The patient made a good recovery, but the effect on the aneurism, if any, was so transient as to be practically *nil*. The aneurism continuing to increase in size, a leaden shield was moulded to it for support. On two occasions a grain of ergotin was injected into the subcutaneous tissue without benefit. On January 1, 1879, Mr. Heath introduced into the sac three pairs of fine sewing needles, making each pair cross within the sac. Considerable clotting of blood took place around the needles, which were withdrawn on the fifth day. The aneurism gradually became solid, but bronchitis supervened, and the patient sank on January 18. The post-mortem examination showed the aneurism to be cured, the sac being nearly full of dense fibrine and communicating with the subclavian artery by a very small aperture close to the broken first rib. Mr. Heath concluded that Sir W. Fergusson's suggestion of amputation at the shoulder for aneurism is not a satisfactory proceeding, and recommended the introduction of fine steel needles as having all the advantages of wire or horsehair with the gain of ready removal without hæmorrhage.

The President said that two points had been raised by Mr. Heath's paper—first, the value of Fergusson's operation in cases of aneurism of the subclavian which could not be tied on the proximal side; and, secondly, the value of needles introduced into the sac in such cases.

Mr. Holmes thought that Mr. Heath had laboured under very great difficulties, for subclavian aneurism was one of the most troublesome with which the surgeon had to deal. In this case, though the aneurism was apparently—in part, at least—traumatic, Mr. Heath had to face the same difficulties as if it had been spontaneous, the coats of the vessel being diseased. In some, pressure might be tried; but if it failed, any other treatment would be unsatisfactory. When partly axillary the vessel might be tied inside, but this was not always possible. Then he thought Fergusson's operation should be tried. In Professor Spence's case the operation really seemed to do good. No favourable results followed in Mr. Holden's and Mr. Smith's cases, but no harm seemed to result, and in Mr. Holden's case at least the patient's condition was almost hopeless. In performing the operation he thought that the condition of parts must regulate the tying of the vessel higher up. He had found ergotine, which had been recommended on the authority of Langenbeck, utterly useless. It was better to use needles than wire or horsehair, as they could always be removed. For his own part, he would not banish the operation; he considered it quite justifiable in cases like that of Professor Spence and that now narrated.

Mr. Willett said that Mr. Holden tied the axillary before proceeding to amputate, so as to be as near the aneurism as possible, and, if possible, to control the hæmorrhage. In a case of his own he had tried diet, with firm

bandaging and pressure, but the aneurism ruptured, and the man died. He had thought of amputating at the shoulder-joint and tying the carotid.

Mr. M. Baker hoped that Mr. Heath's case would not deter others from trying Fergusson's operation. Such a case had been under his care, but the man would not consent to the procedure though under great pain and suffering. For these, at all events, the operation promised some relief. In Mr. Heath's case the tumour probably consisted in great part of coagulated blood. The use of the needles would probably be more beneficial after than before the operation.

The President concurred in what had been said of Fergusson's operation. It ought not to be discouraged on account of the four cases recorded. The principle was sound. If it was not found possible to operate on one side of an aneurism it was a good plan to try the other; and the removal of the upper extremity must limit the flow of blood through the aneurism. From a clinical point of view, we had Professor Spence's case surviving four years. Here the operation must have had some effect. Not one of the others gainsaid its performance. In Mr. Heath's case the aneurism was partly traumatic, and was probably of the nature of a false sacculated aneurism where surgical interference was of little use. In Mr. Smith's case the aneurism was so large that operation would probably have been of little avail wherever the aneurism had been situated. With regard to the introduction of foreign bodies, he could hardly think that iron wire or horsehair could be retained within an aneurism in safety for any length of time. He would, above all, operate early, and not leave it as a last resource. He would operate whilst the aneurism was still sacculated, and he would tie high up.

Dr. Andrews said that it had been assumed that the distal ligature did no harm. Certain it was that some cases of obstruction, especially in the cerebral arteries after embolism, were followed by aneurism on the proximal side of the obstruction.

Mr. Heath was glad of the general consensus of opinion justifying him in trying the operation. Unfortunately its effect seemed *nil;* and amputation was of little use in Professor Spence's case. The sac gave way in both Mr. Holden's and Mr. Smith's cases. Perhaps the ligature favoured this. He had seen Mr. Smith's case under Mr. Hulke at the Middlesex Hospital. There he improved much, but would consent to no operation. He was well pleased with the use of the needles—their use was not very risky.

Death of M. le Docteur Lemaire.—Dr. Lemaire, who, under the name of phenic acid, first introduced carbolic acid as a therapeutical agent, has just died, aged seventy-four. He was formerly *chef de clinique* of Prof. Bouillaud, who pronounced one of his eloquent orations at the grave.

A Waterworks Company again in Default.—The East London Waterworks Company are gaining an unenviable notoriety for inefficiency and litigiousness. Only recently we recorded the infliction upon them of heavy penalties for neglecting to supply the Industrial Dwellings Company with a proper supply of water; and last week they were again summoned to the Worship-street Police-court for neglecting to furnish water to a private house in their district. On the present occasion the Company had taken exception to certain fittings on the plaintiff's premises designed to prevent the waste of water. Skilled evidence was adduced to show that the fittings in question were perfectly appropriate, but the Company claimed the right of dictating what apparatus should be used—a right which was objected to by the plaintiff's solicitor. The magistrate, in giving judgment, said that he could only come to the conclusion that it was an after-thought on the part of the Company to say that the apparatus was not efficient; they had at first taken up an untenable ground, and the new position that the apparatus was not efficient was not supported by evidence. He imposed a penalty of £5 on the Company, and ordered them to pay £10 10s. costs. It is stated that at the East-end of London the complaint is nearly universal that the term "constant supply," as interpreted by the East London Company, means the cutting off of the supply at an early hour every evening. The result is a general outcry for a return to the old "intermittent" system, with water-butts and cisterns, as the lesser of two evils.

OBITUARY.

Sir DOMINIC JOHN CORRIGAN, Bart., M.D.

Although the death of this most distinguished and highly honoured member of the profession of medicine has been daily expected for the past few weeks, yet the news that Sir Dominic Corrigan is no more must cause a feeling of regret akin to that which passes through the national mind when a veteran statesman or a warrior, the hero of a hundred fights, passes from our view within the gloomy portals of the tomb.

It is given to few men to become classic during their lifetime, but of this select number Sir Dominic Corrigan undoubtedly was one. Fame has some of the attributes of time: it withdraws its object from the ordinary level of humanity, and produces an effect of remoteness. Thus it happened that when, in recent years, the name of Corrigan was mentioned in medical society on the Continent, it was a surprise to most to learn that he still survived, so thoroughly had his name been identified with the great masters of the past. This was due not to any inactivity of his latter life, but to the great achievements of his early manhood, which, well-nigh half a century ago, secured for him a world-wide reputation.

On December 1, 1802, the subject of the present memoir (in the compilation of which we desire to acknowledege our indebtedness to an admirable article in the *Freeman's Journal* of Monday last) was born in Thomas-street, Dublin, at the residence of his father, Mr. John Corrigan, a merchant of repute in the Irish metropolis. His mother had been, previously to her marriage, Miss Celia O'Connor. Young Corrigan studied at the Lay College of Saint Patrick at Maynooth, and in due time his father happily selected medicine as a profession for his son, who was accordingly articled as apprentice to the late Dr. O'Kelly, of Maynooth. This shrewd and skilful practitioner was soon struck by the intelligence, ability, and zeal of his pupil, and recommended his father to give him the benefit of a full and liberal medical education in the great Edinburgh school. When proffering this advice, Dr. O'Kelly declared that in his opinion young Corrigan was destined to rise to the very summit of the profession—a prophecy which the old man lived to see realised, and which he delighted to recall.

Accordingly, Corrigan, having spent some time in Dublin, where he attended the clinical lectures, then delivered in Latin, at Sir Patrick Dun's Hospital, proceeded to Edinburgh. Medical studies in those days were carried on under great difficulties, particularly as regards the obtaining of "subjects" for dissection. Warburton's Anatomy Act, which sanctioned the delivery of the unclaimed dead for dissection, did not become law until 1832—seven years after Corrigan had obtained his degree. The result was the existence of "resurrection men," as they were irreverently called. At dead of night, even the medical students themselves sometimes sallied forth to visit some burial-ground and procure "subjects" therefrom. Reckless as such a life should apparently have made them, the medical students of the time had hearts that readily moved to sympathy; and, on one expedition at which Corrigan was present while still a student in Dublin, the touching sight of a poor widow watching and weeping over the grave of her husband, an humble harvester who had died on his return from England, not only secured respect for his remains, but a subscription for the bereaved mourner. In those days there was an urgent demand for surgical assistance of any kind for our troops on active service abroad, and raw youths were despatched, after a few months' study, to fill the vacant places; and Corrigan heard the chairman of an examining board address a candidate thus—"You are wanted immediately for a transport to go with troops to Spain. I will sign the certificate for you, but only on condition that you will now take your oath on the Bible that, whether an accident occur or a man gets sick, you will order nothing more than a poultice or a dose of salts between this and landing."

In 1825 Mr. Corrigan graduated as Doctor of Medicine of he University of Edinburgh; and by a strange coincidence the illustrious Stokes took his degree in the same year at the same University. Shortly afterwards Dr. Corrigan settled in Dublin, and became medical attendant to a dispensary in

Meath-street, where he made his first clinical observations. During the subsequent years he earnestly pursued the study of pathology—so earnestly that in 1832 he was in a position to contribute to the *Edinburgh Medical and Surgical Journal* a memoir on aortic regurgitation, under the title, "Permanent Patency of the Aortic Valves." This masterpiece attracted universal attention at home and abroad, and, although Hope and others wrote on the subject about the same time, the credit of having given the first clear, complete, and accurate account of the disease belongs to Corrigan. It has been well said by a competent authority that little has been added since that time—now half a century ago—to define the pathology, the diagnosis, or the treatment of the disease in question. So highly was the work esteemed abroad, that Professor Trousseau, of Paris, conferred on the disease the name of "Maladie de Corrigan." Dr. Stokes, in his classical work on "Diseases of the Heart and Aorta," observes: "We owe the diagnosis of this disease (permanent patency of the aortic valves) to Dr. Corrigan." At this time, also, Corrigan was much engaged in physiological experiments on the lower animals with reference to the action of the heart, but his scientific reputation—as is too often the case—only seemed to deter patients from consulting the clever physician.

Much sage advice was given him at this stage of his career by men who would take none from him, as he relates. They pointed out various devices by which he should win eminence and a competency, and he has enumerated them in order that they should be avoided, not followed. Some counselled him to frequent flower-shows, charitable bazaars, and afternoon teas; others to put on an appearance of being overwhelmed with work, and to get himself called away, "on urgent business," from church and parties; others again (but this did not suit his pocket) advised that he should take to driving fast through the streets in a carriage. Each of these plans, he was assured, had succeeded in cases mentioned; but the advice only saddened him, and the prospect of such success made him at first inclined to regret that he had entered a profession where such strategy was supposed to be useful. But as he was beginning to despair he came across a little work entitled "Lives of British Physicians, from Linacre to Gooch," which revived his hopes by its array of noble examples. Recommending this book to students ambitious of eminence, he said it would show them, as it did him, that "there is but one road to excellence and success in our profession, and that is by steady study and hard labour." Thinking, no doubt, of his own early struggles in science, and labours unrewarded by public recognition, he has remarked, "The public often wonder when they see men, to them as it were suddenly, bursting into high position and great emoluments, and are prone to attribute it to some ridiculous cause, or chance, or accident; but the public had not seen the long, silent, and continuous hard years of labour in hospital, lecture-room, and study. These labours have been laying the substructure on which the foundation of the edifice of fame and wealth at length arose, which arrested the public eye, and at which it ignorantly wondered." Dr. Corrigan now became connected with the Fever Hospital and House of Recovery, Cork-street, Dublin, and also with the Jervis-street Charitable Infirmary. He resigned the Meath-street Dispensary, and began to make way in the practice of his profession. Unfortunately, those were days of narrow-minded party spirit, and Dr. Corrigan, on being proposed as a Fellow of the King and Queen's College of Physicians was marked out to be black-balled. Happily he lived long enough to take a noble revenge in using all his powers to advance the interests of the College, of which he became a Fellow on October 27, 1856, and was elected President five years in succession (1859-64)—an honour unexampled in the records of the College. In one of the College halls there now stands a noble marble statue of Sir Dominic, chiselled by Foley.

But to return. In 1833, Dr. Corrigan became connected with the Carmichael School of Medicine, where he lectured on Practice of Medicine for several years. In 1840 he was appointed a Physician to the House of Industry Hospitals, in the "clinique" at which he delivered a remarkable course of lectures on "The Nature and Treatment of Fever." These lectures he collected and published in 1853. In 1866 he resigned this hospital appointment. In 1846 he published a memoir on "Famine and Fever as Cause and Effect in Ireland," a work which is only too likely to attract renewed attention at the present day, when the two dark-winged angels, famine and disease, are once more hovering over unhappy Ireland.

To general literature he made only one contribution—the product of a holiday ramble—called "Ten Days in Athens." The title is somewhat of a misnomer, for the book relates observations on the journey from Dublin through France and Italy to Greece, and contains many shrewd remarks on men and things. In the sixtieth volume of the *Dublin Journal of Medical Science* will be found his last published paper—a characteristic communication to the Medical Society of the King and Queen's College of Physicians, made on November 10, 1875, in which he gives an account of his experiences during a visit to Aix-les-Bains.

Marks of public estimation of Corrigan's great talents were shown from time to time. On the foundation of the Queen's University in Ireland, in 1847, he was nominated a member of the Senate, continuing to hold office as such until, on the death of the Right Hon. Sir Maziere Brady, Bart., in 1871, he became Vice-Chancellor of the University. In 1849 the University of Dublin conferred on him the degree of Doctor of Medicine (*honoris causâ*). On February 5, 1866, he was created a baronet, in recognition not only of his very high and very distinguished professional position, but also of his great and gratuitous public services connected with the health and education of Ireland. Sir Dominic Corrigan was also appointed Physician-in-Ordinary to her Majesty the Queen in Ireland. For many years, and up to the time of his death, he represented the Queen's University on the General Medical Council, at the future meetings of which his eloquence, native wit, and ready humour will be much missed.

Sir Dominic's first prominent appearance in Irish politics took place when, in 1868, the death of Sir Benjamin Lee Guinness left a vacancy in the representation of Dublin City. The medical profession had long lamented the exclusion of proper representatives of its interests from Parliament, and, on this opportunity offering, a large number of its members subscribed to assist in covering the expenses of Sir Dominic Corrigan as their candidate. The measures of the Gladstone Government had, however, alarmed many Conservative physicians, and they consequently made a hostile manifestation against Sir Dominic, who did not conceal his Liberal principles. The contest was carried on with great fervour, but Sir Arthur Guinness (then a mere youth) and Mr. Jonathan Pim were returned as members for the city. Sir Dominic was last on the list, the Hon. David Plunket taking precedence of him by about seventy votes. However, Sir Arthur Guinness being unseated on petition, Sir Dominic Corrigan obtained the vacant seat in 1870, taking precedence of Captain King Harman by a thousand votes. He retained the position of representative of Dublin for four years, during which time he acted constantly and consistently with the Liberal party. Certain measures dealing with the interests of the profession were modified or advocated by him, and even his bitterest political opponents must admit that he was—in the interests of the public and of the profession alike—a useful and distinguished member of the House of Commons. His Parliamentary career terminated in 1874, but the experience gained by him in the four years during which he represented his native city was of no little use to him when he took part in the debates of the General Medical Council. Some years before his death Sir Dominic Corrigan was appointed a Commissioner of the Board of National Education in Ireland. He was also appointed Consulting Physician to the House of Industry Hospitals.

Of late years Sir Dominic Corrigan was a great martyr to gout, and *à propos* of this a story is told which is racy of the soil—"*si non vero, è ben trovato.*" One day, while suffering from this distressing malady, Sir Dominic was alighting from his carriage at a fashionable hotel in Dublin, when a beggar woman stepped forward and asked him for alms. He somewhat hastily refused her request, when she exclaimed—"Arrah, then, Sir Dominic, ye'd have given me somethin' if your heart was half as tinder as your toes!" Except for gout Sir Dominic enjoyed good health until the last two or three years of his life, when the infirmities of age began to steal over him. The final stroke came at the close of 1879, and for a few weeks he hovered between life and death. Lion-hearted to the end, he passed away on Sunday, February 1,

at his town residence, 4, Merrion-square West, Dublin, in the seventy-eighth year of his age.

Sir Dominic had married, in 1829, a daughter of the late William Woodlock, Esq., of Dublin. By her he had four children—three sons and one daughter. His eldest son, John Joseph, late Captain in the 3rd Dragoon Guards, died in 1866, leaving an only child, John Joseph, who succeeds to the baronetcy. His second son died young; the third survives; and his only daughter tended him with untiring devotion through the feebleness of the closing years of life.

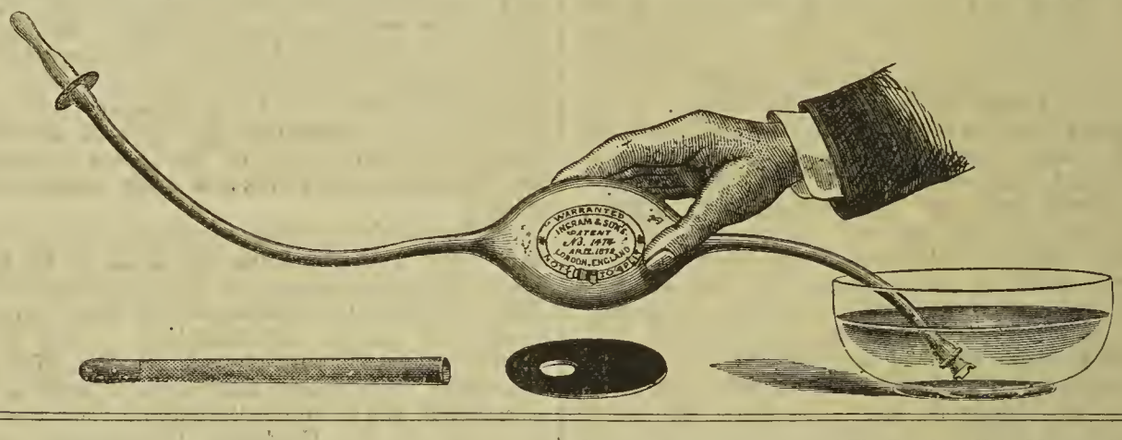
NEW INVENTIONS AND IMPROVEMENTS.

NELSON'S PURE BEEF-TEA.

This preparation, made by Messrs. Nelson, Dale, and Co., 14, Dowgate-hill, London, is a decidedly valuable acquisition. It contains all the constituents of meat—the albumen in both the soluble and coagulated states, and much of the fibrin, as well as the soluble matters contained in the usual beef-teas, etc. Gelatine is added in sufficient proportion to allow of the substance being dried in thin layers, which are then reduced to narrow shreds or cuttings like isinglass or gelatine. The preparation is easily soluble in water, is pleasing to the palate, keeps perfectly well in a dry place, and is very convenient and portable. We have no hesitation in strongly recommending it.

IMPROVED ENEMA APPARATUS.

We have received from J. G. Ingram and Son, of Hackney-wick, E., a sample of their Patent Syphon Enema, which possesses some decided advantages over the ordinary Higginson enema. It is made in one continuous piece, of a uniform surface throughout, instead of having the tubes joined on to the central elastic ball by metallic fastenings; and by this means the possibility of leakage is got rid of. And the ends of both the delivery and the suction tubes are fitted with valves of improved construction. The apparatus is beautifully smooth and well made; and being formed by repeated dippings in a solution of india-rubber until the required thickness is attained, the manufacturers claim for it the further advantages that it will not split, nor become hard or sticky. It is specially prepared to stand well the heat of tropical climates. It packs easily and well, and appears decidedly worthy of recommendation.



MEDICAL NEWS.

University of Durham.—At the primary examination for degrees in Medicine and Surgery at the College of Medicine, Newcastle-on-Tyne, held in January, the following satisfied the examiners:—

Cheetham, Walter Henry, M.R.C.S.
Giles, Bernard F., M.R.C.S., L.S.A.
Lloyd, George J., M.R.C.S., L.S.A.
Mantle, Alfred, M.R.C.S., L.S.A.
Pardington, George L., M.R.C.S., L.R.C.P., L.S.A.
Porter, William Smith, M.R.C.S., L.R.C.P.
Roué, William Barrett.
Seager, H. W., M.R.C.S., L.S.A.
Wills, Joseph Pearce Budgett.
Wray, Charles.

One candidate referred in Botany, and two candidates referred in all subjects, will be permitted to re-enter for examination in April next.

Royal College of Physicians of London.—The following gentlemen were admitted Members on Jan. 29:—

Fowler, James Kingston, M.B. Cambridge, 35, Clarges-street, W.
Huggard, William Richard, M.D. Queen's University, Hammersmith, W.

The following gentlemen were admitted Licentiates on January 29:—

Alvares, Nicolas Sautana, 24, Ampthill-square, N.W.
McKee, Gerald Macklin Eccles, 2, Overstone-road, W.

Apothecaries' Hall, London.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, January 29:—

Hebb, Richard Grainger, Brighton.
Volckman, Ronald, Norwood.

The following gentlemen also on the same day passed their Primary Professional Examination:—

Francis, John Arthur, St. Bartholomew's Hospital.
Unsworth, Francis Henry, London Hospital.

BIRTHS.

Adams.—On January 31, at Brooke House, Upper Clapton, the wife of J. O. Adams, F.R.C.S., of a daughter.

Collingridge.—On January 31, at Selwood, Mayow-road, Forest-hill, S.E., the wife of W. Collingridge, M.B., M.R.C.S., of a daughter, who survived her birth only a few hours.

Collins.—On January 28, at The Beeches, Chew Magna, the wife of Charles Howell Collins, F.R.C.S., of a son.

Page.—On January 21, at 23, Ellison-place, Newcastle-on-Tyne, Margaret Graham, wife of Frederick Page, M.D., of a son.

Pletts.—On January 22, at Kent House, Ryde, Isle of Wight, the wife of J. Menham Pletts, M.D., of a son.

Wilson.—On January 27, at Portland, the wife of Surgeon-Major F. R. Wilson, M.B., of a son.

MARRIAGES.

Barham—Walter.—On January 29, at Bearwood, Berks, the Rev. Frederic Campbell Barham, M.A., youngest son of Charles Barham, M.D., of Truro, to Mary Emily, eldest daughter of J. Walter, Esq., M.P.

Gibson—Butler.—On January 29, at Winchester, the Rev. Herbert Favell Gibson, M.A., Minor Canon of Winchester and Vicar of Collingbourne, Kingston, Wilts, to Katherine Maud, second daughter of F. J. Butler, M.D., of Winchester.

Gill—Bruton.—On December 17, 1879, at Christ Church, Beaufort West, Edmund Rickard Gill, L.R.C.P.E., M.R.C.S.E., to Agnes, eldest daughter of James E. Bruton, Esq., of Cape Town.

Greenwood—Burchill.—On January 24, at St. Mark's, Old-street, Major Greenwood, jun., of 18, Queen's-road, Dalston, to Annie, eldest daughter of P. L. Burchell, M.B., F.R.C.S., of 2, Kingsland-road.

Leacroft—Foster.—On January 29, at Malvern, John William Leacroft, M.B., of Feckenham House, Redditch, to Agnes Ada, widow of the late George Webb Foster, Esq., of Berrow Hill House, Worcestershire.

Nicholls—Faulconer.—On January 27, at Oakley-square, Howard H. J. Nicholls, M.R.C.S., L.S.A., of Hailsham, Sussex, to Harriett, eldest daughter of T. Faulconer, Esq., of Hailsham.

DEATHS.

Coles, George Charles, M.R.C.S., at his father's residence, 20, Great Coram-street, Russell-square, on February 3, aged 37.

Dyer, Henry Sumner, M.D., at 16, Alexander-square, S.W., on January 28, aged 71.

Iliff, Hannah, wife of William Tiffin Iliff, M.D., at 37, Kennington-park-road, S.E., on February 3, aged 50.

Ogle, Sarah, widow of Samuel Ogle, Esq., at the residence of her son, J. W. Ogle, M.D., F.R.C.P., of 30, Cavendish-square, on January 31, in her 80th year.

Oldham, Edward Percy, son of Charles E. Oldham, M.D., at The Grange, Bletchingley, Surrey, on February 1, aged three months.

Owen, E. R., F.R.C.S., at Oxford, on January 28, in his 71st year.

Thomson, Sarah, wife of G. W. Thomson, M.D., formerly of Oldham, Lancashire, at The Limes, Sandy, Beds, on January 28, in her 46th year.

Yate, Henry Wright, M.R.C.S., at Shanghai, shot by misadventure on December 8, 1879.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

Bury St. Edmunds Friendly Societies' Medical Association.—Resident Medical Officer. The successful candidate will be required to dispense medicines occasionally, and to undertake not to engage in private practice. Applications, stating age, etc., accompanied with testimonials, to be sent to Mr. J. Claydon, 9, Orchard-terrace, Bury St. Edmunds, on or before February 23.

District Infirmary, Ashton-under-Lyne.—House-Surgeon. Candidates must possess recognised medical and surgical diplomas. Applications, with testimonials, to be sent to the President, Hugh Mason, Esq., Ashton-under-Lyne, not later than February 25.

Great Yarmouth Hospital.—House-Surgeon. Candidates must be unmarried and duly registered to practise medicine and surgery. Applications, with testimonials, to be sent to R. R. B. Norman, Esq., Hon. Secretary, on or before March 18.

Hungerford Union.—Medical Officer. Candidates must reside in the district. Applications, with testimonials, to be sent to Mr. H. E. Astley, Clerk, on or before February 10.

Liverpool Northern Hospital.—Assistant House-Surgeon. Candidates must possess medical and surgical qualifications from one or more British colleges or institutions recognised under the Medical Act. Applications, with testimonials, to be sent to the Chairman of the Committee not later than February 28.

London Fever Hospital.—Physician and Assistant-Physician. Candidates must be either Fellows or Members of the Royal College of Physicians, London. Applications, with testimonials, to be sent to the Secretary at the Hospital, Liverpool-road, Islington, not later than February 7.

National Hospital for the Paralysed and Epileptic.—Physician for Out-patients and two Assistant-Physicians. Candidates must possess the diploma of Doctor of Medicine, and be Fellows or Members of the Royal College of Physicians. Applications, with copies of testimonials, to be sent to B. Burford Rawlings, Esq., Secretary, on or before February 7.

St. John's Hospital for Skin Diseases.—Clinical Registrars. Applications to be sent to the Board of Management by candidates who will give their services gratuitously. Further particulars can be obtained from St. Vincent Mercier, Esq., Secretary.

St. Luke's Hospital.—Clinical Assistant. Candidates must recently have obtained their diplomas to practise, and will be required to reside in the Hospital, board and residence being provided. Applications, with testimonials, to be sent to the Secretary (from whom further information can be obtained) on or before February 12.

West Sussex, East Hants, and Chichester Infirmary and Dispensary.—Surgeon. Candidates are requested to send in their applications to the Secretary, Mr. William Thomas Askey, House-Surgeon, at least eight days before the day of election, which takes place February 13.

Williton Union, Somerset.—Medical Officer. Candidates must reside in the district. Applications, with testimonials, to be sent to Mr. W. H. White, Clerk, on or before February 9.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Birmingham Parish.—The office of Assistant Medical Officer at the Workhouse is vacant by the resignation of Dr. McVittie: salary £130 per annum.

Norwich Union.—The First District is vacant by the death of Mr. Arthur M. F. Morgan: population 8704; salary £80 per annum.

APPOINTMENTS.

Derby Union.—George Rice, M.R.C.S. Eng., L.R.C.P. Edin., to the North District.

Godstone Union.—Alfred Pratt, M.R.C.S. Eng., L.S.A., to the Western District and the Workhouse.

Lichfield Union.—George H. Lilley, L.R.C.P. Edin., M.R.C.S. Eng., L.S.A., to the Ogley Hay District.

Oldham Union.—Wm. A. Patchett, M.R.C.S. Eng., L.S.A., to the Crompton District.

Tisbury Union.—Walter H. Reed, M.R.C.S. Eng., L.S.A., to the Donhead District.

The annual dinner of the Hunterian Society will be held at the Albion, Aldersgate-street, on Friday, February 13, when Dr. Braxton Hicks, the President, will take the chair.

Erythema from Chloral.—M. Martinet, in a recent *Thèse de Paris*, states:—1. The injection of chloral excites, in a certain number of individuals, an exanthematic eruption which may be called chloralic erythema, a kind of scarlatiniform eruption. Some observers have described urticarial and purpuric chloral rashes. 2. Erythema from chloral is seated chiefly upon the face, neck, and front of the chest, in the neighbourhood of the large articulations, on the extensor surface, backs of the hands and feet, etc. It appears after meals or after drinking alcoholic liquids. Fever is usually absent, and the duration of the eruption is brief. 3. It is accompanied by dyspnœa and by cardiac palpitation, often severe. 4. It occurs in persons predisposed to its influence. 5. It seems to be due to vaso-motor paralysis, as also are the dyspnœa and palpitations which accompany it. 6. Relapses take place from time to time, even after the discontinuance of the chloral.—*Philadelphia Med. Times*, November 22.

The following is the letter referred to in our leader on the subject of the Children's Hospital, Manchester:—"General Hospital and Dispensary for Sick Children, Manchester, January 22, 1880.—To the Editor of the *British Medical Journal*.—Sir,—The article on 'Nurses and Doctors,' which appeared in your journal of the 17th inst., is written with a view to impress upon those in charge of hospitals the absolute necessity of subordinating the nursing of patients to the direction of qualified physicians and surgeons, and in this view the Board of Governors of the Manchester General Hospital and Dispensary for Sick Children fully concur. Such has been the rule and practice of the Hospital. When, however, you proceed to cite, as you state, upon 'good authority,' the suspension and subsequent resignation of Dr. Henry Humphreys as a case in point, and quote a memorial signed by a large number of physicians and surgeons connected with the medical charities of Manchester condemning the action of the Board of Governors in this matter, the Board considers it necessary to point out to you that—firstly, the memorial to Dr. Henry Humphreys has been drawn up and signed upon a one-sided statement, and without any inquiry as to the correctness of its allegations; and secondly, that the so-called facts which you enumerate, upon what you state as 'good authority,' are in many essential particulars inaccurate. The Board has no desire to disparage or deny the medical acquirements and qualifications of Dr. Humphreys. These qualifications obtained him the position he held at the Hospital, which he sought in answer to advertisement, and which he obtained in competition with other applicants. Beyond an advertisement addressed generally to the profession no inducement was offered him. The Board of Governors discovered very soon after Dr. Humphreys' appointment that a medical investigator and experimentalist, however accomplished, was not necessarily gifted with energy or judgment, nor fitted for a position requiring such qualities. This eventually became so apparent in the work of the charity, that the Medical Board, of which, as Senior Physician, he was chairman, did not after his first year re-elect him to the chairmanship, but appointed the Junior Physician to preside over their meetings, prepare their reports, and generally to take the lead in the medical administration of the Hospital. This action was confirmed shortly afterwards by the Board of Governors appointing the Junior Physician medical administrator. Dr. Humphreys tacitly acquiesced in these changes, which reduced him to the position of a ward physician. Your article states that Dr. Humphreys had every reason to believe, and gives evidence that leads it to be supposed that he acted on that belief, that his position in the Hospital was a permanent one; but Dr. Humphreys himself, writing on December 5, 1879, says 'he felt from the time the above changes were made that his footing with the Board of Governors had become unsatisfactory, and he regretted he had not then tendered his resignation.' Had he done so, the resignation would undoubtedly have been accepted. After-events proved it would have been well had he taken this course, for his want of clearness and decision in instructions given with regard to the treatment of patients became a frequent cause of anxiety and embarrassment, and repeatedly came under notice, finally convincing the Board of Governors that Dr. Humphreys was incompetent for the position he held. A feeling of consideration for Dr. Humphreys alone prevented action being taken by the Board at a much earlier period, but when finally he improperly interfered in dissensions between the Lady Superintendent and the members of the nursing staff, in matters entirely unconnected with the medical work of the Hospital, and took such a part as to render discipline impossible, decisive action became necessary. Hence the suspension on the next day, without waiting for the meeting of the Board of Governors, to whom that suspension would have to be reported. Dr. Humphreys tendered his resignation, and, the matter being thus concluded, the Board deemed all further controversy undesirable.—Signed by order of the Board of Governors, Edward Cross, Chairman."

Poor-Law Medical Officers' Association.—At a meeting of the Council of this Association, held on February 3, at their rooms, 3, Bolt-court, Fleet-street, attention was directed to the hardship of the case of Mr. J. J. Terry, of Wittersham, Kent, who, after upwards of forty years' service as Poor-law medical officer, was refused superannuation allowance when incapacitated for further duty. It was resolved that a communication be addressed

to the President of the Local Government Board on this subject, he having promised to a deputation of Poor-law medical officers on June 12, 1876, his willingness to investigate any case of this nature which might be brought before him.

MANCHESTER MEDICO-ETHICAL ASSOCIATION.—At the annual meeting held on January 29 the following office-bearers were elected:—*President:* H. Simpson, M.D. *Vice-Presidents:* R. W. Ledward, M.D.; J. Roberts, M.D.; P. Royle, M.D.; and J. Thorburn, M.D. *Honorary Treasurer:* J. Stone, M.D. *Honorary Secretaries:* A. Wahltuch, M.D., and J. Broadbent, Esq. *Committee:* E. Bishop, Esq.; A. C. Clarke, M.D.; C. J. Cullingworth, Esq.; A. M. Edge, M.D.; J. S. Fletcher, M.D.; R. D. Fox, Esq.; A. Emrys Jones, M.D.; T. Jones, Esq.; W. N. Maccall, M.D.; F. M. Pierce, M.D.; J. Tatham, M.D.; and J. Watson, M.D. *Parliamentary Sub-Committee:* D. Leach, M.D.; F. M. Pierce, M.D.; P. Royle, M.D.; J. Tatham, M.D.; and J. Watson, M.D.

ROYAL COLLEGE OF SURGEONS.—Professor W. K. Parker, F.R.S., will commence his annual course of nine lectures in the theatre of this institution on Monday next, the 9th inst., on the Structure and Functions of the Vertebrate Skeleton. The following is his syllabus:—Lecture I., February 9: Definition of a vertebrated animal; comparison of the type with the higher invertebrata ("Arthropoda"); development of the embryo in the vertebrata. Lecture II., February 11: Classification of the vertebrata; 1, Amniotica; 2, Anamniotica; 1, Ichthyopsida—(*a*) fishes, (*b*) amphibia; 2. A. Sauropsida—(*a*) reptiles, (*b*) birds; B. Mammalia—(*a*) non-placental, (*b*) placental. Lecture III., February 13: Comparison of the skull with the spine, and of the oral appendages with the extra-axial parts in the trunk. Typical *numbers* of segments and organs. Special *forms* of the types as modified, adaptively, to diverse surroundings. Lecture IV., February 16: On the skeleton of cartilaginous and ganoid fishes. Lecture V., February 18: On the skeleton of osseous fishes. Lecture VI., February 20: On the skeleton of the amphibia. Lecture VII., February 23: On the skelcton of thc reptilia. Lecture VIII., February 25: On the skeleton of birds. Lecture IX., February 27: On the skeleton of the mammalia. Summary and conclusion.

GASTROTOMY IN A CASE OF ŒSOPHAGEAL STRICTURE.—Dr. F. Herff, of San Antonio, Texas, communicates the following interesting case to the *St. Louis Courier of Medicine*:—The child, seven years old, swallowed caustic lye one year before the operation, which was performed on August 31, 1879. Since the accident happened she was not able to swallow solids, and sometimes not even liquids; occasionally for three or four days in succession she could not even swallow her saliva. The stricture was situated half-way between the upper and lower ends of sternum. As the child was reduced in strength, and failing from day to day, it was brought to me for treatment. I had seen before several cases of stricture, brought on by the same cause, terminate fatally—one after six years' duration; and I proposed, therefore, after the failure of repeated trials with the sound, to perform gastrotomy, which was accepted by the parents and even the child. Chloroform was given, and the operation performed after the plan of Mr. Howse (Guy's Hospital). It consists of two operations—first, producing adhesions of stomach and abdominal wall by a double row of sutures; and second, after six days (in my case, by a series of unfavourable accidents, it was three weeks), opening the stomach. Both operations were performed very successfully, without fever, peritonitis, or any other bad symptom, and notwithstanding a complication of malarial fever, and an injury by which the wound was partially opened and had to be stitched again. The child is now fed exclusively through the fistula, as she seems to dislike the act of swallowing, by which she very rarely succeeds in getting anything into her stomach. Solid food is cut fine and introduced through the fistula by laying it on the hole and pushing it in with a No. 12 Maisonneuve's indiarubber catheter, which, being very soft, gives her no pain whatever. Liquids are simply poured in by an ordinary funnel inserted into the fistula. In that way she takes beef and other meat (generally raw), eggs, custard, farina, soups, gruel, milk, molasses, soft bread, and once in a while a little brandy. She is strong, and can walk a mile a day, always up and about, and, since two months, her mother attends to the feeding without me. To give the food saliva I have let her spit on the food before ingested, and let her swallow all the saliva she can, which, unfortunately, she is only able to do at times. Her bowels are rather inclined to be costive. Her weight has increased, and all the functions are regular. If she stands up the fistula is closed by a kind of valvular adhesion between the stomach and peritoneal wall, but if she lies down or moves, the contents of the stomach will run out unless prevented by a large tracheotomy-tube, inserted inner end looking up, and closed with an india-rubber cork. She wears the tube day and night without its causing her any inconvenience. She has neither eczema nor any other kind of irritation around the fistula. I believe that the operation, if performed under Lister's spray, and according to the plan of Mr. Howse, is not more dangerous than tracheotomy, and will soon be adopted by the profession as a valuable addition to surgery.

NIGHT-SWEATS OF PHTHISIS.—In a communication to the *Berliner Klin. Woch.*, January 5, Dr. Köhnhorn states that in two cases in which he had tried all other remedies in vain, he met with the most surprising success in treating the profuse night-sweating of phthisis by means of the powder which is employed by the Military Medical Department of the War Minister for the treatment of sweating of the feet. This is composed of salicylic acid three, starch ten, and talc eighty-seven parts. The entire body is to be powdered with this in the evening, the patient protecting the mouth and nose by means of a handkerchief, lest the irritation from the salicylic acid might induce coughing. If the skin is very dry, the powder may be made to adhere to it by first rubbing it with fat bacon or spirits and tannin. [We are informed by Dr. Berkart, of the Victoria-park Hospital, that he has long since found that the most efficacious and prompt means of treating night-sweats consists in, after drying the surface, painting the whole trunk with a very strong aqueous solution of gum acacia. This dries in a few minutes, and next morning the surface is washed with tepid water. A considerable reduction of temperature is produced.]

VARIOLOID IN VACCINATED INFANTS.—Dr. Gerin-Roze related to the Paris Hospital Medical Society two cases of infants, four months of age, who, having been successfully vaccinated, were seized with varioloid. The first of these infants was vaccinated during the first week of its birth, and quite normal pustules resulted. The child was taken into the hospital, where its mother entered it as a patient, and there acquired varioloid, the diagnosis and course of which were verified. The other infant had been born in the Hopital des Cliniques, and when vaccinated its arm exhibited such fine pustules as to lead to its employment as a vaccinifer at the Academy of Medicine. The varioloid went through its characteristic stages. The child was exhibited to show the excellent cicatrices left by the vaccination on both arms. Dr. Gerin-Roze observed that these cases tended to confirm the opinion that vaccination modifies variola rather than prevents its development. Dr. E. Besnier observed that these cases were of interest as tending to shake the general opinion that a successful vaccination rendered the subject safe for a time from even modified variola. But he considered them as quite exceptional, and that no conclusion can be drawn from them adverse to the immunity conferred by vaccination.—*Gaz. Hebd.*, January 30.

THE BOLOGNA MATERNITY FOR UNMARRIED WOMEN.—Dr. Rey adduced some figures, before the Society of Public Medical Hygiene of Paris, in reference to the Bologna Maternity for Unmarried Women, which was opened in 1861, in order to show how useful such an establishment may be when conducted with proper regard for the rules of hygiene. The wards are situated on the first floor, two of these—one containing six, the other eight beds—being employed for pregnant women. Two others, about seven metres square by five and a quarter metres in height, each containing four beds, receive the newly delivered women—these two wards being separated from the others by a large court-yard eighteen metres long and sixteen broad. There is also a room for two *pensionnaires*, another for four female midwifery pupils serving as *internes*, and a third with three beds for the nurses. There have taken place in the Maternity 1564 deliveries, 1412 of which have been natural. The 1412 natural deliveries have furnished 18 deaths, or 1·97 per cent., and the 152 non-spontaneous deliveries were attended with 12 deaths, or 7·89 per cent. It is evident, then, that the residence of women in lying-in

hospitals need not be so mischievous as old statistics represented it to be, providing the proper hygienic necessities be attended to, and for unmarried women is indeed far more favourable than being delivered at their own homes, deprived of many resources and exposed to the depressing effects of shame.—*Jour. de Thérap.*, January.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Dr. Campbell.—The chief medical officer is Dr. Waller Lewis, with a salary of £1000. There are, of course, district medical officers. Write to Dr. Lewis.

Nicotine.—The consumption of tobacco in the United Kingdom in the year 1875 amounted to 49,051,830 lbs., being at the rate of 1 lb. 7½ oz. per head.

A Naval Pension.—Retired Fleet-Surgeon Robert C. Scott has been awarded the Greenwich Hospital pension of £50 a year, vacant by the death of retired Deputy Inspector John Dunlop.

A. Kirby, Deptford.—If the patient is really insane, or shows any active symptoms of insanity, you had better apply to the superintendent at Bethlem Hospital or at St. Luke's, City-road.

A Parent.—Applications are now being received for the preliminary examinations in Arts, etc. Write at once to Mr. Trimmer, to whom you should have addressed your letter at the Royal College of Surgeons, and not at Burlington House.

Foster-Mothers and Infant Mortality.—1. No. 2. The Home Secretary last summer issued a circular to the different local authorities and members of the police force, requesting that the provisions of the Infant Life Protection Act should be properly put in force.

Corrigendum.—In our last week's number, in the pass-list of the Royal College of Surgeons, we gave the name "John Palmer, Langport, Somerset, King's College Hospital." Mr. Palmer was a student at the Middlesex Hospital, and has never attended at King's.

Dr. W., F.R.C.S.—The Calender of the College of Surgeons will give you the desired information. The last annual election of Fellows into the Council of the College of Surgeons took place on Friday, July 4. The annual election of President and Vice-Presidents was on the Friday following.

A Member of a Skating Club.—Skating is generally, by authorities, regarded as of Scandinavian origin. In the colder regions of Europe skating is practised only for purposes of business. It is not a northern amusement. The earliest skates were made of bone. Iron skates were invented by the Dutch.

Retired Army Surgeon.—The salary of the Surgeon to Coldbath-fields Prison is £500 per annum; at Newgate it is £250, and at Holloway the same. The holders of these appointments are—Dr. W. Smiles, Messrs. J. R. Gibson and T. Graham. The first-named gentleman is, we believe, also surgeon to Clerkenwell Prison.

N. P. N., Oxon.—Under a statute of Edward I., coroners are chosen for life. Formerly, none but knights were eligible for the office. This qualification custom was long since lowered to the possession simply of land of the value of £20 a year, and no special requirement as to property is now enforced by law.

A Medical Witness.—The rule is that convicts under life sentences, whether imposed by the Crown in lieu of capital punishment, or by the judges, are not released in any case in less than fifteen years. Releases occur at periods ranging from fifteen to twenty years, depending on the facts and circumstances, and the conduct of the convict during his confinement.

Joe.—The Langton Fellowship at the Owens College, Manchester, is of the annual value of £150 for three years. Past students of the College, who have taken a university degree, or been elected associates, are eligible competitors. Assistance in the work of the College from the Fellow is expected, or he must show that he is preparing for one of the learned professions.

Dangerous Personal Adornments.—The *Kölmische Zeitung* warns the public of the inflammability of the substance known as celluloid. It appears to be composed of gun cotton, sulphuric ether, and camphor. An explosion has occurred in a manufactory for its production. It is extremely inflammable, and persons who wear bracelets, combs, and other articles made of it are cautioned not to expose them to a temperature of more than 150° to 160° Cent.

Vigilans.—In 1871-72, when the effective strength of the Army was 132,000, there were 613 medical officers. In 1877-78, when the numerical strength of the British Army was 131,000 of all ranks, the number of medical officers had fallen to 531. In 1868-69, in the whole of the British Army there were 43 administrative and 1039 executive medical officers. In 1877 the administrative medical officers were 42 and the executive 870.

L. L. S., Shoreditch.—The principle of the Artisans' and Labourers' Dwellings Act is, that the inhabitants of all houses which are a source of danger to themselves or their neighbours should be compelled to leave them. Hardships have unquestionably been inflicted upon the poorer class of the inhabitants in consequence of their eviction from such dwellings, in order that improvements may be made under the Act, but where they set themselves in open defiance of the law they repel sympathy.

I. G. A., Stoke Newington.—Cases have repeatedly been brought under the notice of the President of the Local Government Board, in which it was distinctly stated that the fines had been paid by the Anti-Vaccination Society. To what extent that had been done there appears to be no official means of ascertaining. A magistrate who acts under the thirty-first section of the Vaccination Act, 1867, acts judicially, and may make an order to vaccinate or not, as he pleases. In this sense he has a discretion.

Pro Bono Publico.—Apart from the benevolence of individuals, there is the great centralised system of charity, known as the Assistance Publique. The Municipality of Paris is its chief authority, but a local committee, the Bureau de Bienfaisance, is established in the mairie of each of the twenty arrondissements into which the city is divided. Its visitors bring medical assistance to the sick poor, and distribute alms and food to them in their own homes. It supports the hospitals, and superintends their organisation; it directs the asylums for the aged and helpless, provides for the *enfants trouvés*, the deaf mutes, and the blind, and finally it buries the destitute dead.

Studious.—Schopenhauer, who was a vigorous hater of all noise, observes in a characteristic piece, "On Noise and Din" (*Ueber Lerm und Geräusch*), that people who are indifferent to noises are intellectually dull, being "insensible to reasons, to thought, to poetry, and art, and, in short, to mental impressions of every kind." To this he adds—"The most intelligent and intellectual of all European nations has indeed erected the rule 'never interrupt' into an eleventh commandment." There are instances of remarkable power of self-abstraction in students. "Mrs. Somerville," says Harriet Martineau in her Autobiography, "could write on a scientific subject amid a complete clatter of voices."

Urban and Rural Sanitary Works.—The Croydon Local Board are about to erect public baths in the district of Norwood, at an estimated cost of £4000.——Extensive improvements at the Cumberland and Westmoreland Asylum at Garland are in progress.——By deepening the well of the Waterworks at Frome four feet, the supply of water has been increased from 300 to 568 gallons per minute, or over eighty gallons per head, per day, for the town population, estimated at 10,000.——Alterations and additions of an extensive character are in progress at the Royal Lunatic Asylum, Montrose, N.B., at an estimated cost of £8230.——The Corporation of Dorchester has decided to adopt the precipitative system of dealing with the town sewage—the sewage-farm having been abandoned on account of its heavy cost,—and a scheme is being prepared to meet the requirements of the Rivers' Pollution Prevention Act.——The Local Board for the townships of Featherstone, Purston, Alleton, and Snydale, having a population of 4000 persons, are now carrying out a scheme of sewerage in the populous part of the district.——At Twickenham the new drainage and outfall works have been formally started. They have been in course of construction since 1872, and are based upon the "separate" system, the town being divided into several drainage areas, each of which is discharged by a distinct outfall into the main or transit sewer. The sewage is treated by precipitation, the effluent being afterwards treated by filtration and by aëration in a thin stream passing over prepared surfaces.——The Fulham Board of Guardians have decided upon ordering plans for the extension of the infirmary accommodation.——Two additional wings are nearly completed at the St. Mary's Roman Catholic Asylum and Reformatory at High Park, Drumcondra, increasing the accommodation for women by 250, at a total cost of £9000.——The Local Board of Sowerby Bridge have resolved to adopt a scheme for sewage, and to treat it, on a site of two acres and a half, by precipitation and disinfection.

COMMUNICATIONS have been received from—

Dr. J. W. Moore, Dublin; Messrs. C. Lindsay and Co.; Dr. Duffin London; The Registrar of the University of Durham; Dr. Wolfe, Glasgow; The Registrar of the Royal College of Physicians, London; The Honorary Secretaries of the Manchester Medical Association; Mr. J. Hamilton Craigie, London; The Secretary of the National Social Science Association; Dr. C. P. Coombs; The Secretary of the Hunterian Society; Dr. E. Seguin, New York; The Registrar of Apothecaries' Hall, London; The Editor of "Iron"; The Editor of "The Examiner"; Dr. Horace Dobell, London; The Sanitary Commissioner, Punjaub, India; Sir Joseph Fayrer, London; Dr. W. R. Gowers, London; Dr. Hilton Fagge, London; Mr. J. Chatto, London; The Secretary of the Royal Medical and Chirurgical Society of London; Dr. F. De Havilland Hall, London; Mr. T. M. Stone, London; Dr. Edward I. Sparks, Mentone; Mr. A. Kirby, Deptford; Mr. H. H. Graham, London; Mr. Thomas Comfield, London; Mr. S. Flood Page, London; Mr. E. J. Mansfield, London; The Secretary of the Royal Institution; Dr. J. Mitchell Bruce, London; Mr. Shirley F. Murphy, London; Dr. F. Taylor, London; The Registrar-General, Edinburgh; Mr. J. H. Minchinton, London; The Assistant-Secretary of the Royal Microscopical Society; Mr. Wickham Barnes, London.

BOOKS AND PAMPHLETS RECEIVED—

Messrs. Masters and Son's Catalogue of Artificial Limbs—Transactions of the Odontological Society of Great Britain, vol. xii.—The Sanitation of Small Cities, by David Prince, M.D.—Atlas of Histology, by E. Klein, M.D., F.R.S., and E. Noble Smith, L.R.C.P., M.R.C.S.—Responsibility Restricted by Insane Delusion, by T. L. Wright M.D., Bellefontain, O.—Studies in Life, by H. Sinclair Paterson, M.D.—Handbook of Therapeutics, by Sydney Ringer, M.D.—Observations on Fatty Heart, by Henry Kennedy, A.B., M.B.—Aids to Physiology, by B. Thompson Lowne, F.R.C.S.—Aids to Materia Medica and Therapeutics, by C. E. Armand Semple, B.A., M.B.—The Relationship of Anatomy to the Fine Arts, by S. Messenger Bradley, F.R.C.S.—Mr. Thomas Fletcher's Catalogue of Furnaces, etc.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Centralblatt für die Medicinischen Wissenschaften—Gazette Hebdomadaire—Louisville Medical News—Nature—Revue Médicale—El Siglo Medico—Galveston Medical Journal—Weekly Return of Births and Deaths—Indian Medical Gazette Advertiser—National Anti-Compulsory Vaccination Reporter—Lincoln Gazette—Centralblatt für praktische Augenheilkunde—American Bookseller—Centralblatt für Gynäkologie—Monthly Homœopathic Review—St. Louis Clinical Record—Herald Supplement—Veterinarian—National Board of Health Bulletin—Philadelphia Medical Times—Index Medicus—Trinity College, London, Journal—Edinburgh Medical Journal—Students' Journal and Hospital Gazette—Analyst—Archives Générales de Médecine—Glasgow Medical Journal—Boston Medical and Surgical Journal—Western Morning News, February 2.

APPOINTMENTS FOR THE WEEK.

February 7. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

Royal Institution, 3 p.m. Prof. Pauer, "Handel."

9. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. Mr. A. Pearce Gould, "On a Case of 'Melanotic Sarcoma' of the Penis." Dr. Woakes, "On Ear-Sneezing and Ear-Giddiness." Dr. Farquharson, "On some Therapeutic Superstitions."

10. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Royal Medical and Chirurgical Society (Ballot, 8 p.m.), 8½ p.m. Mr. Lawson Tait, "On the Antiseptic Theory tested by the Statistics of One Hundred Cases of Successful Ovariotomy." Dr. V. Carter, "Contributions to the Experimental Pathology of 'Spirillum Fever.'"

Royal Institution, 3 p.m. Prof. Schäfer, "Physiology of Muscle."

11. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Lister), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.

Hunterian Society (London Institution) (Annual General Meeting for the Election of Officers, 7½ p.m.), 8 p.m. Dr. Pye-Smith will deliver the Hunterian Oration.

Royal Microscopical Society, 8 p.m. Annual Meeting. President's Address, etc.

12. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.. Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

Royal Institution, 3 p.m. Prof. Dewar, "Recent Chemical Progress."

13. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

Clinical Society (Council Meeting), 8½ p.m. Mr. Henry Morris, "On a Case of Traumatic Salivary Fistula treated by passing a Fine Catgut Bougie from the Mouth along Stenson's Duct." Mr. Hulke, "On a Case of Sutural Union of the Median Nerve in the Lower Part of the Forearm, Five Weeks after its Division by a Broken Glass Bottle, followed by Return of Function." Dr. Sangster, "On a Case of Disturbed Nutrition, with Suppuration and Exfoliation of the Nails, probably of Strumous Origin." Mr. Heath, "On Two Cases of Popliteal Aneurism cured by the application of Esmarch's Bandage."

Queckett Microscopical Club (University College), 8 p.m. Meeting.

Royal Institution, 9 p.m. Mr. W. H. Preece, "Wheatstone's Telegraphic Achievement."

VITAL STATISTICS OF LONDON.

Week ending Saturday, January 31, 1880.

BIRTHS.

Births of Boys, 1275; Girls, 1161; Total, 2436.
Corrected average in the 10 years 1870-79, 2487·3.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	1084	1116	2200
Average of the ten years 1870-79, corrected to increased population	802·1	791·0	1593·1
Deaths of people aged 80 and upwards ...	...	...	99

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa
West	561359	8	3	10	4	27	1	5	...	1
North ...	751729	1	4	21	1	42	...	2	...	...
Central ...	334369	...	3	6	3	16	...	1	...	1
East	639111	...	9	11	...	16	2	1	1	...
South	967692	2	14	22	2	92	...	6	...	3
Total	3254260	11	33	70	10	193	3	15	1	5

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	30·105 in.
Mean temperature	29·2°
Highest point of thermometer	50·7°
Lowest point of thermometer	17·2°
Mean dew-point temperature	26·5°
General direction of wind	E. & S.S.E.
Whole amount of rain in the week	0·00 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, Jan. 31, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1880.*	Persons to an Acre. (1880.)	Births Registered during the week ending Jan. 31.	Deaths Registered during the week ending Jan. 31.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In centimetres.
London	3664149	48·6	2436	2200	50·7	17·2	29·2	−1·56	0·00	0·00
Brighton	107321	45·6	66	56	43·8	19·3	30·5	−0·84	0·00	0·00
Portsmouth ...	134224	29·9	82	54	...	...	...	...	...	...
Norwich	85827	11·5	58	41	48·0	19·0	31·6	−0·22	0·00	0·00
Plymouth	74993	53·8	49	46	49·8	23·2	34·0	1·11	0·01	0·03
Bristol	213536	48·0	118	102	53·0	19·0	31·2	−0·45	0·00	0·00
Wolverhampton ...	75970	22·4	66	24	42·2	15·6	27·1	−2·72	0·00	0·00
Birmingham ...	394738	47·0	306	198	...	...	...	...	...	...
Leicester	129912	40·6	86	71	48·8	18·0	31·1	−0·50	0·00	0·00
Nottingham ...	173627	17·4	114	101	45·1	14·0	28·5	−1·95	0·01	0·03
Liverpool	544056	104·4	421	331	...	...	...	...	...	...
Manchester ...	363130	84·6	246	243	...	...	...	...	...	...
Salford	185786	35·9	147	115	...	...	...	...	...	...
Oldham	115413	24·7	80	66	...	...	...	...	...	...
Bradford	197196	27·3	113	91	52·0	23·7	34·1	1·17	0·00	0·00
Leeds	318929	14·8	218	166	51·0	20·0	33·0	0·56	0·00	0·00
Sheffield	304938	15·5	178	125	56·0	21·7	35·6	2·01	0·00	0·00
Hull	149627	41·2	115	101	45·0	21·0	30·8	−0·67	0·00	0·00
Sunderland ...	116730	42·2	100	55	51·0	26·0	35·9	2·17	0·00	0·00
Newcastle-on-Tyne	149366	27·8	111	78	...	...	...	...	...	...
Edinburgh	229839	54·8	132	111	49·7	25·2	39·4	4·11	0·04	0·10
Glasgow	589598	97·7	363	295	50·0	32·3	41·6	5·34	0·89	2·51
Dublin	314666	31·3	181	294	52·6	23·0	41·6	5·34	0·13	0·33
Total of 23 Towns in United Kingdom	8633571	39·2	5783	4964	56·0	14·0	33·5	0·84	0·07	0·18

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 30·11 in. The lowest reading was 30·01 in. on Sunday at mid-day, and the highest 30·22 in. on Tuesday morning.

* The figures for the English and Scottish towns (except for Nottingham, Salford, and Oldham) are the numbers enumerated in April, 1871, raised to the middle of 1880 by the addition of nine years and a quarter's increase, calculated at the rate which prevailed between 1861 and 1871. Revised estimates have been adopted for Nottingham, Salford, and Oldham, based upon special returns of inhabited houses existing within those boroughs. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON LYMPHANGIOMATA AND LYMPHATIC ŒDEMA.

By S. MESSENGER BRADLEY, F.R.C.S.,
Surgeon to the Manchester Royal Infirmary, and Lecturer on Practical Surgery, Owens College.

Gentlemen,—The cases which are collected here this morning are representative of different forms of lymphatic obstruction, in some instances giving rise to tumours more or less distinctly cystic, *lymphangiomata*, in others resulting in a solid or *lymphatic œdema*.

Let us first examine this little girl (aged three), whose tongue protrudes from her mouth like an over-ripe plum. Looked at without previous knowledge of such a disease, you would probably regard it as a vascular enlargement akin to nævus; but although it is not unlike nævus in some respects, yet it is by no means a vascular growth, but is dependent on a hypertrophy of the tongue stroma, with cystic enlargement and dilatation of the lymphatics of that organ. You will observe that besides being prolapsed, and so large that it cannot be entirely withdrawn into the mouth, it is of a deep plum colour, and dotted over, especially on its under surface, with small semi-transparent bodies like grains of sago; these are indeed ampullary dilatations of peripheral lymphatics, and correspond to the cysts which stud the interior of the organ. The condition is always congenital, and is sometimes associated, as you see it is in this case, with cystic formations beneath the jaw and in the neck. These are likewise of lymphatic origin, with a trabecular network enclosing considerable spaces, which are lined with the crenated endothelium characteristic of lymphatic vessels. The proper treatment for macro-glossia is excision of the prolapsed and hypertrophied portion. This operation may be effected with the knife, écraseur, or scissors, and does not present any special features of difficulty or interest.

This lad with a big upper lip (macro-chilia), which looks as if it were swollen from the effects of a blow, is really suffering from a very similar affection. Section of this lip would show great increase in the intermuscular connective tissue, along with spaces filled with lymph. Sometimes, it is true, such a lip is due to the hypertrophy of connective tissue only; at others it is formed entirely by cavernous cystoid degenerations; more frequently, however, both forms are combined.

I, indeed, entirely agree with Billroth in regarding these cases of hypertrophy combined with lymphoid cystic formations as altogether dependent on the presence of lymph in abnormal quantities. Not only do such hypertrophies accompany and result from lymph stasis in the tongue and lip, but may occur from congestion, forming so-called giant growths, or local hypertrophies.

To return for a moment to these cases of macro-glossia and macro-chilia: the tumours in both cases are elastic to the feel, non-fluctuating, and cannot be sensibly diminished by pressure. We have records of a sufficient number of similar cases to predict with confidence the nature of the enlargement. The cysts in both range from cavities the size of a pea to microscopic spaces; both contain lymph and lymph-cells, and both are associated with a hypertrophic growth, which is at once the result and the most prominent symptom of the obstruction of the ordinary lymph-channels. Inflammation is not a necessary precursor of the enlargement, though as a rule these growths appear specially prone to inflammatory attacks, in the course of which the swelling notably increases. These attacks of inflammation not infrequently invade the neighbouring glands at the same time. As I have already said, excision of the affected portion is the proper course to pursue in both cases.

It is desirable that such rare specimens as these should be permanently preserved, and for this purpose I should advise you to adopt the plan which you saw me take with this mammary tumour. Immediately after removal it was wiped as dry as possible and placed in this shallow glass dish. Then the tumour was covered with this transparent jelly, which being heated with hot water becomes liquid; it soon, however, solidifies, and, being beautifully transparent, enables you to see the specimen, not through a glass darkly, but as it were face to face. The jelly, which is prepared by Messrs. Wooley, of this city, is made permanently antiseptic by the addition of a small quantity of thymol (one part in 500), for it is found that while this suffices to preserve it from change, the addition of more thymol renders the jelly more or less opaque. By this plan we preserve any specimen in its original form; preserving not only the shape and the structure, but the colour, which is in many cases so characteristic, and, as a rule, so fleeting. Dr. William Roberts suggested to me to try boric acid and chloroform, both which are powerful arresters of fermentation; but thymol appears to me to answer so well that I have not cared to try other agents.

I speak somewhat dogmatically as to the real nature of these curious growths, gentlemen, but my confidence is based on experience of similar cases, where the histology of the hypertrophied tissues has been satisfactorily settled by examination. I would, indeed, in all such cases—and such cases must be understood to include all cases of tumours whose nature is in dispute—advise you to satisfy yourselves of their microscopic as well as their macroscopic characters. For this purpose we must have recourse to some such instrument as this muscle-trocar, or Duchenne's harpoon, which may be plunged into the tumour to be investigated, and withdrawn with a small bit of the growth, which may then and there be submitted to microscopic examination. I say, we should practise this plan before rashly and too confidently deciding upon the nature of doubtful growths; and I am in hopes that a little instrument which Messrs. Wood of this city are now making for me may prove a more serviceable weapon than either of those at present in vogue.

Let me now, gentlemen, draw your attention to these remaining cases of lymphatic œdema. The first that I show you is this woman, with a hard, swollen, and brawny arm. She is forty years of age, and for about six months has noticed that the right arm is larger than the left. On coming to the Infirmary, a mass of hard, and it is presumed cancerous, glands were found in the axilla. As you perceive, they are beginning to ulcerate and form a large tumour; they do not, however, appear to be pressing upon the axillary vein, and we regard the swelling, which is much more solid than œdema due to venous obstruction, as resulting from occlusion of the ordinary lymphatic channels.

Lymphatic œdema produced in this way—that is, by cancerous blocking of the glands—is not uncommon. Cases of this kind have been related by Jonathan Hutchinson, by myself, and by other observers; and of course it is easy enough to understand that, if the chain of glands in the axilla or elsewhere is so filled with cancer cells, the stream of lymph must be arrested in its passage, and the back-flow thus produced must give rise, first to stasis of lymph, and then to œdema in the parts below. Obstruction is indeed invariably the cause of lymphatic œdema, though the obstruction may be variously situated, in the lymphatic capillaries, or in the lymphatic trunks or glands, or in the thoracic duct, or even at the caval orifices of the heart. Inflammation may or may not precede and give rise to the obstruction, but obstruction is always the cause of the œdema.

In those cases—and they constitute the great majority—of lymphatic œdema dependent upon obstruction in the lymphatic capillaries, it will be found, with few exceptions, that the patients are subject to recurrent, though it may be ephemeral, attacks of dermic inflammation, erythema, or perhaps erysipelas. Such, for example, is the case in this girl, who is suffering from solid œdema of the right leg. She has been affected in this way now for more than eighteen months, and is frequently attacked by erysipelas in the same limb, each attack leaving the leg more swollen than before. At times enormous hypertrophy of the skin and cellular tissue is thus occasioned; a typical form of elephantiasis Arabum indeed is induced, which is neither more nor less than lymphatic œdema with resultant development of the dermic and subdermic tissues. The hypertrophy, in a word, not only *may*, but doubtless often *does*, result from the mere passive outflow of lymph; the mere presence of this lymph exuded under pressure—lymph rich in cells—directly leading to increase of the connective tissue and induration.

You will also readily understand, gentlemen, how it some-

times happens that the more superficial lymphatics become dilated under pressure, thus causing a lymphangiectasis, and that, the pressure continuing, their thin walls are prone to give way, and a lymphorrhœa commence. The quantity which thus escapes is at times excessive, amounting to several pints daily; and such a flux is naturally followed by marked debility, just as a large bleeding would be.

Instead of bursting externally, it may be that these dilated lymphatic ampullæ may project and burst into the urinary passage, when chyluria occurs, which, as is well known, is a by no means uncommon complication of elephantiasis, and which is sufficiently comprehensible without having recourse to the filaria sanguinis hominis as a necessarily causal relation.

More rarely, the cutaneous and subcutaneous lymphatics, though much dilated, do not form prominent pouches or vesicles on the skin or mucous surfaces, but are associated with a localised and considerable hypertrophy of the skin and connective tissue, which may hang down in large pendulous masses, simulating lipomata and allied tumours. These growths are termed lymphangiectodes.

Although most common in hot, moist climates, it is, however, frequently met with in temperate and even in cold countries, and, according to Alard, is as truly endemic in certain parts of Spain as in any tropical country. In this country nothing but the most general causes can be assigned for the disease. It is certainly not hereditary, and, beyond being perhaps most common in individuals of a lymphatic habit, it cannot be said to be associated with any special diathesis. It has been observed in connexion with syphilis by Hutchinson, and in two cases with carcinoma by myself; and it is probable that in both instances there was a true causal connexion, and not a mere accidental association: the syphilis and the carcinoma mechanically obstructing the lymph paths by infiltrating and blocking the intercalated glands; but in the majority of cases neither syphilis nor cancer exists, and these diseases can therefore only act as occasional and exceptional causes. It has been observed in the young, the middle-aged, and the old, of both sexes, but it is commonest in the male sex and in early adult life.

I do not think that more can safely be said about its etiology as it crops up sporadically amongst us; but in tropical countries, where it is endemic, there is a totally different cause assigned, viz., the presence of a minute parasitic nematode, called the filaria sanguinis hominis. Sir Joseph Fayrer has published an excellent paper in the medical journals, giving a full account of this parasite, of its discovery, and its connexion with chyluria and elephantisis. I shall content myself by referring you to his article.

I should, however, not omit to observe that if this view of the etiology of the malady is correct in India, it certainly does not apply in this country.

Diagnosis.—Lymphatic œdema has to be distinguished from venous œdema, from certain cases of scleroderma, and from mere hypertrophy of the subcutaneous fat. From the first it is to be separated by the much firmer and more brawny nature of the swelling, by its greater persistency, and by the absence of phlebitis. From scleroderma the diagnosis is not always easy. As a rule, however, there is absolutely no œdema in cases of scleroderma, and then a differential diagnosis may be established; but in other cases it is probable that scleroderma commences in a true lymphangitis of the more superficial tubes, followed quickly by effusion and organisation of lymph. When this occurs the two diseases cannot be regarded as essentially distinct. From these somewhat rare cases of localised overgrowth of fat, the entire absence of pitting on pressure and the absolute freedom of the skin may serve to settle the difficulty. Those instances in which, although there is œdema, the connective tissue hypertrophy forms much the most prominent feature, should unquestionably be ranked as true specimens of lymphatic œdema. Here the associated lymphangitis of the deeper tubes has induced this hypertrophic growth, just as the more superficial lymphangitis is prone to lead to dermic and epidermic hypertrophy. Lymphatic œdema is occasionally, though rarely, associated with a bronze discolouration of the skin: this does not complicate the diagnosis, but, taken in connexion with the fact that Addison's disease has been met with in cases where there was no affection of the supra-renal capsules, it is perhaps suggestive of a further function of the lymphatic system. Whether the solar plexus has always been healthy in these rare cases, I am not able to state.

Prognosis.—Lymphatic œdema is rarely in itself a fatal disease; the patient often drags his cumbersome malady about with him for many years, to die at last of some totally distinct affection. It may, however, tend to death by anæmia, which may even quickly ensue if there be obstruction in the thoracic duct; or it may exhaust by copious discharges of lymph; or intercurrent attacks of erysipelas may carry off the patient. It is, however, very chronic as a rule—*e.g.*, Tilbury Fox, quoting Waring, says that out of 218 cases it lasted between twenty-six and fifty-five years. A cure may be regarded as probable in cases not far advanced, and still more in cases due to a specific taint; even in old-standing cases a cure is sometimes effected, but as a rule it does not then prove very amenable to treatment.

The success attending the treatment of lymphatic œdema must always largely depend upon the cause of the particular case. Thus it may be affirmed that those cases dependent upon a deep-seated central obstruction are necessarily incurable, whilst those which owe their origin to inflammatory action, be it in the cellular tissue of a part, or more distinctly in the lymphatic trunks, will probably yield to, or at least be benefited by, judicious and continuous treatment.

The treatment may be briefly summarised as consisting in applying pressure to the elevated limb, and in frictions with small quantities of strong mercurial ointment. Iodide of potassium, mercury, and iodine have all proved of service when administered internally, and, though not supported by ratiocination, ligature of the main artery of the affected part has so frequently been followed by a cure that we must accept the operation as truly remedial in some cases.(a)

Hospitals of France.—According to the official *Annuaire*, just published, for 1877, there are in France 1524 hospital establishments, viz., 362 hospitals, 786 hospital hospices, and 376 hospices. These are served by 28,527 *employés* and servants, of which number 2730 are physicians, surgeons, and pharmacians, and 11,205 *réligieuses*, etc. Of the total 164,362 beds, 71,683 are devoted to sickness, 53,064 to infirmity and old age, and 16,414 to childhood.—*Union Méd.*, February.

Injections of Ergotin in Prolapsus of Rectum and Hæmorrhoids.—At the meeting of the Therapeutical Society in December (*Gaz. Hebd.*, January 2), Dr. Ferrand related the case of a lady, thirty-five years of age, who during three years had suffered from rectal and hæmorrhoidal prolapsus, to the extent that she could not walk about a room without a tumour almost as large as a fist descending, inducing most acute suffering. The tumour could be reduced, whilst lying in bed, by means of a prolonged and very painful taxis, which had to be repeated after every stool. Having tried all the usual remedies in vain, Dr. Ferrand performed a subcutaneous injection of ergotin, depositing 1 gramme 20 centigrammes of a solution composed of glycerine and water āā 15, and alkaline hydrated extract of ergot 2 parts, in the ischio-rectal fossa beside the hæmorrhoidal projection. Considerable amelioration resulted, and three other injections were practised at intervals of twenty days, ten days, and a month, with the result of effecting a cure. The patient was seen six months afterwards, and it was found that the prolapsus was not reproduced in walking, going up many flights of stairs, etc. Dr. Vidal related a case in which a complete cure of hæmorrhoidal prolapse which had resisted all treatment was effected by means of twenty-two injections of Bonjean's ergotine (one part to five of distilled water), in quantities gradually increased from fifteen to twenty-two drops. In two other cases which he has since treated, five and six injections sufficed. Dr. Vidal latterly has preferred, however, Yvon's solution of ergot to Bonjean's ergotine as causing less pain.

(a) I make this statement after a careful perusal of all the cases I can find in which this treatment has been adopted. If accurately reported, it is certain that neither the rest in bed nor the bandaging which they underwent was the cause of cure, but assuredly the ligature of the artery. It is certainly difficult to understand how deligation of the main bloodvessel of a limb can favourably affect a disease which is altogether beyond the pale of the blood-vascular system—it appears unphysiological, even absurd; but it is still more difficult to doubt, after reading the cases in detail, that this method of treatment has often been crowned with success when all others had failed. If it be decided to resort to this plan, Vanzetti's method of digital compression of the artery, rather than deligation, would be preferable.

ORIGINAL COMMUNICATIONS.

ABSTRACT OF REMARKS

ON ARTICULAR AND OSSEOUS LESIONS IN LOCOMOTOR ATAXY.

ADDRESSED TO THE PATHOLOGICAL SOCIETY.

By THOMAS BUZZARD, M.D., F.R.C.P.,
Physician to the National Hospital for Epilepsy and Paralysis, etc.

Dr. Buzzard exhibited three patients suffering from very well marked articular and osseous lesions occurring in the course of locomotor ataxia. One of these—a man—had previously been shown at another society, and a history of the case had been published (*Lancet*, January 18, 1879). Only the salient points of the case were, therefore, related. He is a typical example of tabes dorsalis, in whom the right hip-joint became completely disorganised (the head and neck of the femur having entirely disappeared) within a space, probably, of three months. He presents, besides, a curious bony process nine inches long, developed in the superior tendon of the rectus femoris muscle of the same side. Of the two other patients (females) the first was Elizabeth W., aged fifty, widow, an in-patient of the National Hospital for the Paralysed and Epileptic, for the opportunity of observing whom Dr. Buzzard was indebted to the kindness of Dr. Lediard of the Cleveland-street Sick Asylum, under whose care she had previously been. The patient, who has suffered for about eleven years from typical "lightning" pains in her legs and arms, has been affected for an equal time with attacks of the *crises gastriques* of Charcot—attacks in which there is pain in the stomach and chest, with continual retching and vomiting, occurring at irregular intervals, sometimes as many as four in four months, the longest period of exemption having been eight months. Other symptoms of tabes which she presents are—ataxic gait, very small pupils not reacting to light, analgesia of extremities, defective muscular sense, absence of patellar tendon reflex. In October, 1878, whilst walking quietly along the ward, her right femur fractured through its neck. In July, 1879, whilst retching in bed, the left hip-joint suddenly "bulged out." Since then she has been quite unable to stand. Mr. Adams, who had examined the patient at Dr. Buzzard's request, reports the movements of both hip-joints free, but limited in some directions, with crepitation more marked in the right than in the left. On the right side the top of the great trochanter is nearly level with the anterior superior spinous process, and on the left the trochanter is extremely prominent and the bone enlarged. The conditions observed may be due, he thinks, either to spontaneous fracture of the neck of bone on each side, or to complete disorganisation of the joint with atrophic changes and absorption of the head and neck of the bone on the right side, and similar changes on the left, associated with enlargement of the great trochanter from the throwing out of new bone. The second female case was that of Catherine M., aged thirty-six, married, an out-patient of the National Hospital for the Paralysed and Epileptic. For the opportunity of observing this patient Dr. Buzzard expressed his obligations to Professor Henry Smith, who had invited him to see the woman when she was a patient in King's College Hospital, and had facilitated his following up the case after her discharge. Like the other woman, she has been subject, in this case, for upwards of ten years, to attacks not only of typical "lightning" pains in her extremities, recurring at intervals of a month or two, and lasting three or four days, but also to very characteristic *crises gastriques*. These occur at irregular intervals, between which she feels quite well; but she has never been six months without an attack. There is distension, pain, and more or less vomiting and retching, which formerly lasted two or three days, but is now not so severe; but griping and flatulent eructation recur daily for weeks at a time. Her other symptoms have been staggering gait, diplopia, inability to stand with eyes shut, partial colour-blindness, pupils insensitive to light, analgesia of extremities. Three years ago the right leg became red and swollen, though not painful, which symptoms subsided under rest. They recurred in June, 1878. In the September following the swelling had gone down, but the knee-joint was now useless. At the same time the left leg began to swell, and was larger than natural when she was admitted into King's College Hospital at the end of the year. At that time the right knee-joint was found to be disorganised. There was grating, but no pain on moving the ends of the bones. The internal condyle was enlarged, and projected inwards; the external condyle could not be felt. The patella rested on the outer surface of the lower end of the femur, the ligamentum patellæ being wasted. There was fluctuation in the joint. The left leg was swollen, and its knee-joint, which was apparently not affected on admission, became enlarged, and the leg dislocated outwards and backwards during the patient's stay of one month in the hospital. The muscles of the lower extremities were wasted. She was discharged at the end of January with leather supports to each knee, which enable her to move about with help. Lately there have been found some swelling and crepitation in the right shoulder-joint. Mr. Broster, Resident Medical Officer to the National Hospital in Queen-square, reports, as to the present condition, that it feels as though all ligamentous connexions had disappeared from the right knee-joint. The ends of the bones cannot be brought in apposition, and they are so loosely connected that the patient, ere she puts on the leather casing, has to splice them together with a bandage. They can be knocked together audibly, an dwithout pain. It seems as though the condyles had been bevelled off, and the end of the femur turned into a rounded and smooth stump, whilst the upper end of the tibia is bevelled off inwards. The patella lies two inches above and to the outside of the end of the femur. Along the outer side of the inner hamstring is a firm, smooth, rounded mass, one inch by half an inch. On the left side the tibia and fibula are dislocated backwards and slightly outwards. The condyles are rounded off, the inner one being enlarged, and the patella lies over the end of the femur in front. Dr. Buzzard remarked that although nearly twelve years had elapsed since Charcot first described the arthropathy which was apt to occur in tabes, the subject had hitherto engaged but little attention in England. So far as he knew, the three patients present were the first living specimens of the disease which had been exhibited at a metropolitan medical society, although the profession was indebted to the President (Mr. Hutchinson) for important contributions to the subject in his recent lectures at the College of Surgeons. Soon after Charcot's description had appeared, Dr. Clifford Allbutt published "A Case of Locomotor Ataxy with Hydrarthrosis" in the *St. George's Hospital Reports* for 1869, and this was the first described in England. The second was published by the speaker (Dr. Buzzard) in the *Lancet*, August 22, 1874. It was a typical example of tabes, with enormous swelling and disorganisation of the knee-joint, which began when the patient had been affected at least five years with the disease, and proceeded with great rapidity. This, with the cases now exhibited, made altogether four well-marked examples which had occurred in Dr. Buzzard's practice, but he had besides seen a few others of similar nature, but less broadly characteristic. This scarcity of experience in England contrasted strongly with the amount of interest which the subject had attracted in France, where important contributions regarding it had been made by Ball, Vulpian, Richet, Dubois, Bourneville, Bouchard, Oulmont, Voisin, Michel, Bourceret, and others. Dr. Buzzard referred especially to articles by Talamon (*Revue Mensuelle*, Paris, 1878), to which he had been indebted for information. In 1873 Dr. Weir Mitchell had alluded incidentally to the frequency of fractures occurring in tabetic patients; and about the same time Charcot brought to the Société Anatomique of Paris the case of a woman (affected with tabes dorsalis) in whom, concurrently with great disorganisation of certain joints, multiple fractures of the neck of the left femur and of *both* bones of *both* forearms had occurred. At the present time Charcot is disposed to consider the alteration in the nutrition of the osseous tissue the prominent fact, both the joint changes and the spontaneous fractures being secondary manifestations of the fault of nutrition of the bone, dependent on an influence of the nervous system. According to the same authority, the extremely rapid wearing away (*usure*) of the articular extremities is the principal character which distinguishes tabetic arthropathy from arthritis deformans. It was noteworthy, in reference to the case of Elizabeth W., that in cases

of spontaneous fracture due to tabes it was common to find a more than usually exuberant callus thrown out. Dr. Buzzard pointed out that in the three patients present there were, or had been, examples of all the conditions which had been described as characterising the osseous and articular lesions of locomotor ataxia. Extensive swelling, more often than not painless, and never confined to the joint itself, but extending also down the long axis of the limb, disappearance or disablement of the articular ligaments, rapid erosion and absorption of the ends of the bones, were the features which marked two of the cases. In the other, spontaneous fracture, certainly of one femur, and, as he believed, also of the other, was coupled with the formation of what was probably a voluminous callus. The evidence that the patients were examples of tabes dorsalis was not open to the least doubt. Referring to the question as to the exact seat of the lesion in the nervous centres, Dr. Buzzard remarked that Charcot's original idea that this was probably to be found in the anterior cornua of the cord had not been supported by the results of three recent autopsies of arthropathic cases in which the cells in the anterior horns had been found perfectly healthy. On the other side, too, he referred to the frequency with which extensive changes in the cells of the anterior horns had been found in cases of amyotrophy, which presented no such osseous lesions as those they were now considering. He drew attention to the remarkable fact that the symptoms known as *crises gastriques*, which were comparatively rare in tabes (he had met with them only eight times, and in only four of these cases were they well pronounced, in a range of fifty-six cases of tabes in his own experience), were extraordinarily frequent in these cases of arthropathy. They were present in two out of his own four cases: they occurred in the only instance of spontaneous fracture in a tabetic patient which Vulpian had witnessed; and in a range of sixteen other cases of arthropathy which he had collected from French sources, six were characterised by the gastric phenomena. This association was too remarkable, he thought, to be attributed to accidental coincidence. As the gastric symptoms might, with some confidence, be ascribed to sclerosal invasion of the roots of the vagus, he ventured to suggest the probability that change in some structure contiguous to these in the medulla oblongata might be found to be the lesion giving rise to the altered nutrition in the osseous system, and he thought that it was in this quarter that pathological anatomy might usefully direct its inquiries. Without claiming for this idea any position beyond that of a legitimate hypothesis, suggested by the clinical association of symptoms, Dr. Buzzard pointed out how much aid the discovery of a centre for nutrition of articulations in the medulla oblongata would afford towards the explanation of the remarkable association of cardiac complications with articular rheumatism, as well as the occasional high temperature witnessed in the latter disease, besides perhaps helping to throw light on the obscure pathology of arthritis deformans.

THE ECONOMICS OF THE CALCUTTA HOSPITALS.

By JAMES IRVING, M.D.,
Late Surgeon-General to the Bengal Government.

We have received the following communication from Dr Irving on the subject of some recent articles in our columns, which appears so valuable as to deserve the most prominent place we can give it:—

In a late issue of the *Medical Times and Gazette* I observe an article headed "The Economics of the Calcutta Hospitals," in which my name is mentioned. I trust therefore you will allow me to confirm all that you have written, and to indicate the mode in which the economies of Sir A. Eden, Lieutenant-Governor of Bengal, were being carried out when I left Calcutta a short time ago. You allude to the manner in which two distinguished Bengal Medical Officers, Dr. N. Chevers, of the Medical College Hospital, and Dr. J. Ewart, of the General Hospital, were treated by the Government of Bengal in being first condemned unheard, and then having the Government resolution, in which they were so condemned, sent to them for any remarks they might have to offer, long after its publication. You might also have called attention to the case of Dr. Woodford, who was at the head of the Campbell Hospital, and who was summarily dismissed after some thirty years of approved service—his case being the most unjust of all.(a) As to the Committee appointed by the Lieutenant-Governor to inquire into the medical expenditure in the Calcutta hospitals, it did not contain a single independent member, all being civilians or medical officers under his orders. Their report was exactly what was expected, and proved all that had been anticipated by his Honour!

From the time that the Government of Bengal took up the subject of Calcutta hospitals, it seemed to me that most of the medical officers appeared to think that the great object of hospital management was to maintain their patients as cheaply as possible, rather than to see how many they could cure. It was part of my duty to report on the Campbell Hospital, which is intended for the reception of native paupers, and in which the mortality is 25 per cent.; and in alluding to this appalling death-rate I ventured to express a doubt whether the rate fixed by the Committee for diet, extras, and stimulants—viz., less than sixpence per patient—was sufficient, seeing that many of the sick admitted could at first only take milk, which was very expensive in Calcutta. I wrote as follows:—"It thus appears that of all patients admitted into this Hospital one-quarter of the number perish, which is a fact to arrest attention and suggest the question whether this frightful mortality might not be reduced by a more liberal use of generous soups, milk, stimulants, and other kinds of food suitable for the wretched creatures who at present die so freely." In reference to this remark the Lieutenant-Governor wrote as under:—"It is no doubt the case that there are many hundreds of persons in the streets of Calcutta whose health might be improved, and, indeed, from whom disease might be averted, by 'a liberal use of generous soups, milk, stimulants, and other kinds of food'; and the Lieutenant-Governor knows of no town in the world of which the same might not be said; and he is not aware that any government in the world has recognised it as a part of its duty to raise taxes for the purpose of averting disease by a system of general public diets." Now, I ask whether this is a just comment on what I had said? From what the Lieutenant-Governor writes, it might be imagined that I had proposed a free distribution of soups and rum-and-milk in the streets of Calcutta by the police or under the auspices of his Committee, instead of merely suggesting that possibly a more liberal diet than could be obtained for 6d. a day might tend to diminish a rate of mortality in a hospital supported by Government, which, I think, you will agree with me in considering to be disgraceful—or, at all events, worthy of an attempt to diminish. My offence, no doubt, was that I had the temerity to question the wisdom of Sir A. Eden or his Committee.

At random I shall give you a few circumstances which came under my observation, and which will show you the state of matters in Calcutta since the Lieutenant-Governor commenced his crusade. The patients in the Campbell Hospital are treated by Indian assistant-surgeons, who are naturally timid, as well as very desirous of pleasing their superiors and carrying out all orders. On visiting this institution, in which the mortality is so high, one day in the spring of 1878, I found that there were upwards of 350 patients, of whom over thirty were returned as moribund—that is, expected to die a short time after admission,—and for all these 350 patients some five or six ounces of rum, and about nine or ten seers of milk (a seer being two pounds) were issued, besides a few ounces of mutton; and these were the only extras for the day. The assistant-surgeons, I afterwards discovered, were afraid to order stimulants, knowing that the authorities objected to extras. To the thirty moribund patients no rum (which is the only spirit permitted) was issued. Fruit is cheap enough in Calcutta, but with difficulty could any be got for the sick. The milk used was obtained from a contractor at the rate, if I recollect rightly, of ten seers for the rupee, when the usual selling price of good milk was six or seven seers per rupee. The contractor of course had to dilute the milk in order to obtain his profit.

(a) The opinion held by many in Calcutta, medical and non-medical, is "that some personal *animus* towards Dr. Woodford was the miserable motive-power in which Sir A. Eden's crusade against the hospitals originated."

After the reduced diets came in force, medical officers were compelled to wink at the practice which the patients adopted of obtaining from outside articles of food to supplement their allowance. I was told of a medical officer who wanted to prescribe an article of extra diet for a European patient in hospital, who, before doing so, asked his clerk whether he could do so without exceeding the rate fixed—viz., 1s. a head for food and extras,—and, on being told that he was then up to the mark, he had to take one man off extras in order to put on the new patient, who seemed more to require them. Fancy, if you can, a physician or surgeon of a hospital in this country having to do such a thing! I am fully aware that the Government of Bengal has said that medical officers may order for their patients anything they deem necessary; but, being in the service, they are not independent, and probably feel that if they exceeded the rates they would be marked men, or might probably be turned out of their appointments. To show how the above permission is regarded, I know for a fact that the assistant-surgeons of one of the hospitals were told that no pressure was put on them in the matter of prescribing stimulants and extras, and that they had liberty to order anything they chose; but it was added that they would be held responsible for the quantities used. Anyone who knows natives will easily comprehend how they understood this permission. In their eyes it was about the same as a prohibition.

In your article you allude to the diet of the European pauper lunatics in Calcutta, who are fed on an average rate of 4½ annas or 6¾d. each. There is no scale of diet, so one cannot determine how the unfortunates are fed, though there can be little doubt that their food must be rather meagre, and that the only meat they ever get is grass-fed beef, which cannot be of very good quality. Knowing that lunatics, as a rule, ought to be well fed, I tried to discover how the inmates of the asylum were dieted, but failed. The odd part of it is that Dr. Payne, who has managed to bring the rate for each lunatic's diet down to 6¾d. a day, was member of a committee of medical officers which in the year 1870 strongly recommended that the rate of diet-money for European patients in the Medical College Hospital should be raised to 12 annas a day, which had been found by him to be the average rate for Europeans in the lunatic asylum, "where all receive a liberal diet, but no stimulants." I would have you notice that articles of food were much cheaper in 1870 than they are now. The case of the man Dessa, who recently shot at the Viceroy, will probably be the means of directing attention to the necessity for material alterations in the mode of working the lunacy laws and to the lunatic asylums of Bengal. In its rage for hospital economy, the Government has a short time ago discharged a number of lunatics who were hitherto deemed proper objects for safe custody, so that if Dessa's case does not elicit a full inquiry, it will possibly come after one of the recently released lunatics has committed murder or some other dreadful crime.

In conclusion, I would say that I fully acknowledge the necessity for the most rigid economy in India at the present time, and that I am, and ever have been, a strenuous advocate for economy in hospital management, although I consider that such economy may be overdone, and that it is now being carried to extremes in Calcutta.

THE next meeting of the Society of Medical Officers of Health will be held at 1, Adam-street, Adelphi on Friday, February 20, at 7.30 p.m., when Dr. G. B. Longstaff will read a paper entitled "Some Facts bearing on the Etiology of Summer Diarrhœa" (illustrated by diagrams).

THE UNIVERSITY OF STRASBURG.—According to the inscriptions for the session 1879-80, the total number of auditors is 810, viz., 750 matriculated students and 60 "free auditors." The Faculty of Theology numbers 58 students, that of Law 209, that of Medicine 148, that of Letters 188, and that of Sciences 147. Of the 750 inscribed students, 158 belong to Alsace-Lorraine. The present is the highest number of inscriptions yet attained at Strasburg. Commencing with 220 in 1872, the inscriptions increased to 495 in 1873, to 667 in 1874, to 672 in 1875, to 700 in 1876, to 658 in 1877, to 736 in 1878, to 787 in 1879, and to 810 at the end of 1879.—*Lyon Médical*, February 1.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

GUY'S HOSPITAL.

CHOREA IN AN ADULT, FOLLOWED BY ACUTE RHEUMATISM.

(Under the care of Dr. WILKS.)

[FOR the notes of this case we are indebted to the Clinical Clerk, Mr. G. F. Dixon.]

James S., aged thirty-seven years, a wire-worker, was admitted on December 3, 1879. On admission the following history was obtained:—His father died at the age of fifty-nine, his mother at the age of forty-five: he does not know from what causes. He has several brothers and sisters alive and healthy; none of them have ever had chorea or other nervous affection, nor is there any rheumatic family history or predisposition. Patient has been married for nine years; he has five children, all healthy, and his wife has had no miscarriage; he has never had syphilis. He is a total abstainer, but his work has been carried on in a close room, and he has been a great tea-drinker, drinking three or four pints of tea a day. His present illness began about three years ago, when patient first noticed a twitching of the left side, and then applied to and was admitted into King's College Hospital, where he stayed for three weeks, and then attended as an out-patient. He was better for the treatment. At this time his head was occasionally affected by irregular movements, but only slightly. Eighteen months ago patient was attacked on the right side by similar twitchings; he then went into St. Thomas's Hospital for a month, and afterwards attended for some time as an out-patient, improving under treatment; but he again became worse when he ceased attending. Subsequently he became an in-patient for ten weeks at the Hospital for the Epileptic and Paralysed in Queen-square; and was again improved by treatment. From that time (June, 1879) until his admission here he had tried to work at his usual occupation, but as he got much worse he had to give it up. Patient is a short, spare, wretched-looking man; he looks very much older then he is, and his hair is quite grey. He answers questions somewhat slowly, and has an impediment in his speech, but speaks quite correctly. As he lies in bed his head is continually moving from side to side, and then forwards and backwards on to his pillow. He lies on his back with his hands crossed on his chest and his elbows are continually moving to and from his side. His legs are quite still, but he says they and the whole of his body often move irregularly when he is in bed. When walking he has apparently not perfect control over his legs, for he walks and staggers like a drunken man. When asleep the whole body and head are quiet. Temperature 98°; pulse 84. The tongue (which he cannot keep out for more than a few seconds at a time) is clean, moist, and healthy; the bowels are regular, and appetite is good. The lungs and heart are normal; the urine healthy, specific gravity 1020. Patient has been placed on full diet with milk, cod-liver oil one drachm twice a day has been ordered, and a sedative draught containing bromide of potassium and hyoscyamus is to be taken at bed-time.

December 10.—The evening draught has been discontinued as it has made the patient restless. Since he has been in hospital the movements have been less troublesome, and he says that he feels better. On the 8th a mixture containing three grains of sulphate of zinc and five minims of tincture of opium was ordered to be taken three times a day.

14th.—On the 12th the dose of the sulphate of zinc was increased to five grains. This evening patient has complained of great pain in the feet, knees, shoulders, and arms, and of profuse sweating; the left knee-joint is swollen and painful; the tongue is white and dry; the bowels have not acted for two days, and appetite is quite lost. Temperature at 8.30 p.m. 103°; pulse 94. Twenty grains of salicylate of soda have been ordered to be taken every three hours.

15th.—Patient is rather better this morning; the pain in the joints is about the same; bowels have not acted yet. Temperature 10.45 a.m., 100·3°; 1.30 p.m., 100·6°; evening, 100·8°. Heart-sounds are normal. His diet has been altered to milk and beef-tea.

16th.—He slept better last night, but complains much of pain in the limbs, especially in the arms. The tongue is white and dry; bowels constipated. Morning temperature 100·7°; evening 100·6°.

18th.—Temperature this morning 98·8°, evening 99·6°. There is now only slight pain in the left arm and shoulder, and the swelling has disappeared from the left knee-joint; the bowels acted twice to-day; tongue white and coated, but inclined to clean.

24th.—Patient is very much better, and the choreic movements have almost ceased. The temperature still rises to about 99·5° every evening, but is normal in the morning. He has been allowed full diet again.

26th.—To-day the rheumatism has returned. For the first time a somewhat rough systolic bruit is to be heard at the base, apex, and outside the nipple (the second sound of the heart is not accentuated); the tongue is furred; and there is some swelling and tenderness of the left wrist. Temperature 102·4°; pulse 90. His diet has been altered, and the salicylate of soda resumed.

29th.—The rheumatic symptoms are now much less. Temperature 99·2°.

January 1.—The left wrist is better, but there is some fluid in the left knee-joint. The choreic movements are decidedly worse—patient not lying nearly so still as he did a week ago. The tongue is clean and moist.

4th.—There is now no pain in any of the joints, except in the right wrist, and the chorea is less. He sleeps well, and his appetite is good, but the bowels are confined. A mixture containing tinct. ferri perchlor. has been ordered, and patient is again on full diet.

8th.—There are occasional pains in one or more joints, but of short duration. The cardiac bruit is less clearly heard, and the temperature is normal.

14th.—Patient seems to have quite got rid of the rheumatism, but he is much troubled with the chorea. He now gets up every evening for a little time. He is taking five minims of liquor arsenicalis three times a day.

17th.—The cardiac bruit is almost inaudible. The choreic movements are decidedly less marked, and patient's general condition has improved.

21st.—He complains to-day of a slight return of pains in the leg and wrist, and has an aching pain over the lumbar region. His appetite is good; tongue clean; bowels rather constipated. Temperature 99·6°.

24th.—To-day there is a second decided relapse. There are acute pains in the right shoulder and elbow, both knees and feet, and a little effusion into the knee-joints. The cardiac bruit is a little louder; the tongue is coated and the bowels are confined. Temperature 100·3°. The salicylate is commenced again, and patient has been put on milk diet.

25th.—Temperature 101·3°. Patient complains less of pain in the joints.

26th.—Morning temperature 101·6°; evening temperature 101°. Patient says the pains are almost entirely gone; the tongue is white and dry, but the bowels are open.

28th.—Temperature normal to-day; last night 99°. The choreic movements have been more marked lately, as they usually have been when the rheumatic attacks are severe.

30th.—Patient seems now to have recovered his usual condition; there are no rheumatic pains, and the movements are quieter. Temperature normal. Full diet resumed.

February 2.—The pain returns slightly at times, and to-day he has pain in the right knee and foot. The tongue is clean, and the appetite is good. The chorea is better; the cardiac bruit is still audible, but does not increase.

6th.—Patient keeps much better in every respect. He gets up every evening for an hour or two, and will go home in the ensuing week. He is again taking the arsenic mixture. On the whole the choreic movements have been reduced since admission, but have not ceased. His general condition has also improved.

ST. THOMAS'S HOSPITAL.

A CASE OF HÆMOGLOBINURIA.

(Under the care of Dr. STONE.)

Frederick T., a draper's shopman, single, aged twenty-eight, was admitted into the medical ward on December 29, 1879. The following are the main particulars of his history:

His father is alive and healthy; his mother died sixteen years ago in childbirth. Patient is the oldest of a family of four: one of his brothers suffers with some affection of the lungs; the others are healthy. There is no family history of consumption, rheumatism, or gout, either near or remote. Five years and a half before admission patient had an attack of gonorrhœa, followed by a chancre on the penis. At that time he was laid up for three months, and was under treatment at another hospital. While taking medicine spots came out all over his body, but there do not seem to have been any symptoms of secondary syphilis since. He is now rather bald, and he thinks that his hair came out about five years ago, although it was always rather thin. After this illness he returned to work, and was quite well until about three years ago, when he found he was suddenly quite unable to pass his water. There seems to have been some slight stricture remaining after the gonorrhœa, which, however, had not before been troublesome. The stricture came on in the middle of the night, when he was seized with urgent desire to void his urine, but was unable to do so. This seems to have been a spasmodic stricture chiefly, as he was able in the morning to pass water freely. He attended at a hospital, where a catheter was passed, and was afterwards in the habit of occasionally passing one for himself. In October, 1878, for the first time he passed a stream of black blood. He remembers that he had a rigor both before and after passing it, and his urine was afterwards quite clear. On the day following the passing of the blood he was again unable to pass any water, and then applied to St. Thomas's Hospital for relief, when he was admitted under the care of Mr. Mac Cormac. An attempt to pass a catheter was at first unsuccessful; but after he had been placed in a tepid bath a No. 1 catheter was got into the bladder. He remained an in-patient for about two months; and before he left a No. 12 catheter could be passed. About Christmas, 1878, he was pronounced well enough to leave the hospital, and was away for three or four days; while out he passed almost pure black blood by the urethra, the weather being then very cold. He returned to the hospital, when the urine again become normal. During the summer of 1879 the urine was free from blood; but he had a slight attack of stricture in June, and after passing a catheter for himself a little blood came from the urethra; this seems to have been only local bleeding. In October, 1879, he was again taken with an attack of shivering and passed blood with his urine. He then applied to this hospital, and was taken in under the care of Mr. Croft, and remained in the surgical wards until his transference to the care of Dr. Stone. While on the surgical side Mr. Croft explored the urethra and bladder, and found there was no stricture or false passage, nor any foreign body in the bladder. On December 4 it was noted that the urine was feebly acid—specific gravity 1032, slightly albuminous, red in colour; and that under the microscope there were seen oxalates, granular cells, and *débris* of corpuscles; with the peroxide of hydrogen and guaiacum test it gave a distinct blue colour. While at rest in bed his condition improved, and no blood was passed; but on December 18, after having been out in the open air for a few hours, he had a recurrence of the bleeding.

On admission into the medical wards, patient is an anæmic, slightly built man. He now weighs eight stone nine pounds; his weight when in good condition having been about nine stone eleven pounds or ten stone. He says that he has noticed that cold weather or exposure brings the attacks on, and that they are accompanied or preceded by shivering. He has noticed that of late he has suffered much from coldness of the hands and feet, and that he has felt much weaker and has lost flesh within the last twelve months. He has always been steady and temperate, but has had very long hours of work in business, and at times has had to rough it, occasionally not being able to get enough to eat, and not being warmly enough clothed. He complains of feeling weak across the abdomen, and says that he has frequent chills "down his back." There is some vesical weakness, as after his urine is passed a little comes dribbling away.

January 5.—Patient had a rigor this morning, and passed urine apparently tinged with blood. On examination its specific gravity was 1015; it contained a small quantity of albumen, and under the microscope some white cells and broken-down blood-corpuscles were seen, but no oxalates, as noted when in the surgical wards. With the spectroscope

the double absorption-band of oxidised hæmoglobin was seen. Temperature in rigor, 103·2°.

6th.—The urine to-day is clear and normal, and the temperature is 97°.

8th.—At 2.30 p.m. patient had another rigor. His temperature reached 102°, and the urine passed contained blood-colouring matter.

11th.—At 5.30 p.m. to-day patient had another rigor; temperature 103°. At 7.30 p.m. his temperature was 102·2°, and at 11.30 p.m. 97°. No blood-colouring matter appeared in the urine.

14th.—At 12 noon to-day there was again a rigor (patient's temperature in the meantime having been normal or subnormal), and his temperature was 100·7°. In the evening at 9 p.m. his temperature was 98·2°. The urine remains normal.

19th.—Another rigor occurred to-day at 1 p.m., with a temperature of 101°, but without colouring matter in the urine.

Patient still remains in the hospital (February 2), but there has been no recurrence of the rigors, either with or without hæmoglobinuria. It was noticed that the urine passed in the latter attacks was brighter than in the early ones, and on different occasions it gave different spectroscopic appearances, the double and the single absorption-bands having been visible. An interesting point, Dr. Stone pointed out, for which the reason was obscure, was the later attacks of rigor without change in the urine. The cause of the attacks might probably be found in the weakness produced by the old syphilitic disease and to the unfavourable condition to which the patient was afterwards exposed. The medical treatment throughout was of the simplest character; and as the patient himself noticed, and as was evident from his history, the attacks were nearly always traceable to exposure to cold, and were kept off by the rest in hospital, where he had the advantages of warmth and suitable diet.

Professor Parker, F.R.S.—This gentleman commenced his course of lectures on the Structure and Functions of the Vertebrate Skeleton in the theatre of the Royal College of Surgeons, on Monday last, and will continue them on succeeding Mondays, Wednesdays, and Fridays, at four o'clock; on the completion of which, on the 27th inst., he will be succeeded by Professor Flower, who will commence his course on the following Monday, the 1st prox., and deliver nine lectures on the Comparative Anatomy of Man.

The Health of Torquay.—In reviewing the sanitary improvements which have taken place at Torquay during the year 1879, Mr. Paul Q. Karkeek, the Medical Officer of Health for the district, states that nearly four hundred ventilators have been inserted in the public sewers, which have worked satisfactorily, and a number of dead-ends of drains have been done away with, so as to promote a free current of air. The sewers have had very effective flushing during the period, owing to the tremendous rainfall, but the arrangements for artificial flushing in drier seasons have been gradually advanced. With regard to the proposed erection of a fever hospital for the district, long under contemplation, Mr. Karkeek prefaces his remarks by quoting the proverb that "all public bodies are slow to action"; he is able to state, however, that something has been done, since the site for the hospital has been decided on, the arrangements for its purchase are nearly finished, and, to a certain extent, the plans exist—on paper. There are hopes, therefore, that some future annual report may contain the announcement of the building being actually ready for the reception of patients. In the course of house-to-house visitation some wells were discovered, the water from which on examination was found to be contaminated. These have been ordered to be closed, and the owners have been directed to avail themselves of the public water-supply, which is stated to be very good. The health of the district has been satisfactory during the past year, the death-rate per 1000 of population, calculated on the basis of the last census returns, being given as 17·2; but, having regard to the large increase in the number of houses in the locality and to the consequent increase in the population, Mr. Karkeek is of opinion that the true death-rate should be reckoned at about 14·2 per 1000. The mortality from the zymotic class of diseases has been less than the average.

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Medical Times and Gazette.

SATURDAY, FEBRUARY 14, 1880.

THE LICENSING BODIES AND THE GENERAL MEDICAL COUNCIL.

Among the allegations most frequently brought against the General Medical Council, and especially urged in the indictment of that body before the Select Committee on the Medical Bills, are these—that the Recommendations of the Council have very little weight with the licensing bodies; that the most important Recommendations are often disregarded; and that the Council has never put in action the power it possesses of enforcing compliance with them, but has gone on trusting, in vain, in moral suasion. That the last clause of the indictment is, with the exception of the words "in vain," true, has never been disputed; but the Committee were not able to obtain any clear evidence as to how far in extent and degree the remaining clauses are true. No doubt some specific evidence was given as to Recommendations that had been disregarded; but, so far as we remember, it referred to the state of things many years ago; and no one could say with exactness how many Recommendations have been complied with, and how many neglected, or, as the accusers of the Council say, treated with contempt. The Committee therefore directed the Registrar of the Council to apply to the various licensing bodies for full and exact details in regard to the inquiries, whether their regulations and practice are or are not in accordance with the Recommendations of the General Medical Council on Education and Examination; and, if not conformable to the Recommendations, wherein do they differ therefrom? Answers to this application have been received from all the licensing bodies with the exception of the Queen's University in Ireland; and these answers have, with great labour, been carefully tabulated by the Registrar. The Recommendations are thirty-three in number, dealing with Preliminary Examination, Registration of Students,

and Professional Education and Examination; and we propose, for the information of our readers, to give, as briefly as may be consistent with clearness, an analysis of the answers from the licensing bodies. We give elsewhere in our pages the Recommendations in full.

1. This Recommendation is that certificates of proficiency in general (preliminary) education shall not be received unless the examination has included certain specified subjects. From the answers it appears that the requirements of none of the licensing bodies fall below the Recommendation, while those of several exceed it. The Universities in general go beyond it, in number or in extent of subjects, or in both. The Royal College of Surgeons in Ireland has always required candidates to pass in Greek; but, recognising the importance of inducing students to study the natural sciences before entering on their professional studies, "will gladly accede to any regulation made by the Medical Council intended to induce all the licensing bodies to introduce these subjects, or modern languages, into their preliminary examinations." The Apothecaries' Hall of Ireland also makes Greek a *compulsory* subject.

2. Recommends "that the examination in general education be left to the Universities, and such other bodies engaged in general education and examination as may from time to time be approved by the Council." This is a recent Recommendation. The Royal College of Surgeons has deferred the consideration of it, pending the result of the proposed establishment of a conjoint scheme. The Apothecaries' Society confides the examination to a board consisting of graduates in Arts. The practice of the Royal College of Physicians and of the English Universities is "conformable" with the Recommendation. The Scotch corporations object to giving up the examinations which are conducted by their own boards of examiners in Arts; of the Universities, Edinburgh is conformable, Aberdeen "approves," St. Andrews "disapproves," and Glasgow conducts the examination by means of a special committee appointed for the purpose. In Ireland, the King and Queen's College of Physicians is conformable; the College of Surgeons is not disposed to surrender its control so long as examinations are not supervised by the Medical Council, but would be willing to act upon the Recommendation "if a sufficient examination should be established accessible to students without undue cost, and independent of any professional educational body; the Apothecaries' Hall is disposed to accept the Recommendation provided *Greek* be included in the examination; and the University of Dublin desires to offer no opinion.

3. Recommends that cases in which decided ignorance in the subjects of general education is shown at the professional examinations shall be reported to the Council, with the name of the board or boards before which the preliminary examinations have been passed. In England, the Colleges are "conformable," and the Society of Apothecaries say the examiners have received no instruction on the subject, but if decided ignorance were manifested the licence would not be granted; the Universities are practically "conformable," but Oxford makes "no comment." In Scotland, the corporations carry out the Recommendation; the University of Glasgow says the examiners make a note of any case of ignorance, but do not inquire before what board the candidate passed, nor has any report been hitherto transmitted on the subject, and the other Universities state that no such cases have been known. In Ireland, the University of Dublin "offers no opinion," the Apothecaries' Hall objects "because of the seemingly invidious character" of the Recommendation, but will carry it into effect "so soon as the other medical bodies do so"; the other corporations assent to the principle.

4, 5, and 6 regard registration. The various corporations have given up the registration of students since the General Medical Council and the Branch Council instituted students' registers, and the practice of the Universities is "conformable" with the Recommendations, so those bodies make no comment on them. But the University of St. Andrews, the University of Dublin, and the Irish College of Physicians disapprove of the discretionary power, vested by Recommendation 6 in the Branch Councils, to admit special exceptions to Recommendations 4 and 5; and the Irish College of Physicians, while approving of "the principle" of Recommendations 4 and 5, observes that there is "no regulation," as "in Ireland students do not always register at the commencement of their studies."

7. The principle is that no candidate shall be admitted to a final examination for a qualification whose name has not been entered in the students' register at least forty-five months previously. The conformity with this is almost strictly universal; but the University of Aberdeen observes that candidates who "take the final examination at the April term do so after at least forty-two months"; and the Irish College of Surgeons "is aware that students are enabled by the regulations of most licensing bodies, and will be able, under the present Recommendations of the Medical Council, to present themselves for examination upon a less period of *bonâ fide* study than even three years."

8. No one shall obtain a licence to practise before he is twenty-one, and the age shall be duly certified. The practice of all is in conformity practically; but the College of Physicians in Ireland has "no regulation," because "the vast majority of candidates for its licence have already obtained one or more registrable qualifications"; and the Irish College of Surgeons seems also to have no regulation, but "will be happy to adopt this Recommendation, and make it of universal application."

9. The same in effect as No. 8, and the replies to it are the same.

10. That the course of professional study shall occupy at least four years, of which at least three winter and two summer sessions shall have been passed at a recognised school. All the bodies require at least as much as is recommended; but the Irish College of Physicians, being very conscientious, says "not conformable" as regards hospital practice, "as the College considers that at least *three* winter and *three* summer sessions are required."

11. That no teaching or licensing body should require more than one course of lectures to be attended on any one subject. A very recent Recommendation. In England, the College of Physicians has it under consideration, "with a view to its adoption," the Council of the College of Surgeons have not yet had it before them, and the Apothecaries' Society adopt it, except in the case of anatomy; the regulations of the Universities of Oxford and London are conformable, Cambridge requires candidates for the degree of Master in Surgery to have attended a second course on anatomy, and Durham requires two courses on several subjects. In Scotland, the College of Physicians complies in regard to its single licence, but from candidates for the double qualification of the two Colleges, or of the College of Physicians and the Faculty of Physicians and Surgeons of Glasgow, additional courses in Medicine or Surgery, systematic or clinical, are required; the College of Surgeons requires a second course of Anatomy or of dissection, and of Surgery or Clinical Surgery, and the Glasgow Faculty requires double courses of Anatomy and of Surgery (or Clinical Surgery); the Universities are all "conformable." In Ireland, the College of Physicians is "conformable"; the College of Surgeons does not approve, and considers that certain of the subjects of the curriculum cannot possibly be taught in so limited a course of lectures; the Apothecaries'

Hall has hitherto required two courses of Anatomy and Physiology, but will require only one in future; the University of Dublin requires two courses, from the same professor, of theoretical and operative Surgery.

12. Gives the subjects, eight in number, without a knowledge of which no candidate should be allowed to obtain a registrable qualification. In England, the College of Physicians is "conformable"; the College of Surgeons approves, and is about to make provision for examination in most or all of the subjects in which it has not examined hitherto; and the Apothecaries' Society examines in all subjects except surgery; the regulations of the Universities are in conformity with the Recommendation. In Scotland, all the licensing bodies are in conformity, and the Universities require, in addition, Botany and Natural History (or Zoology). In Ireland, the College of Physicians conforms, the College of Surgeons holds a special examination, and grants a distinct diploma in Midwifery; the Hall requires Botany and Hygiene in addition; and the University of Dublin, in addition, requires the candidate to pass in Ophthalmic Medicine and in Botany, and to give evidence of personal attendance on cases of Midwifery—this all the bodies require, we believe—and on fever cases.

13. Is mildly worded—"the Council will view with approbation any encouragement held out by the licensing bodies to students to prosecute the study of the natural sciences before they engage in studies of a strictly professional character." The regulations of nearly all the Universities in England and Scotland appear, from the replies, to be "conformable," whatever that may imply in this case; the University of Dublin, as in many other instances, "does not desire to offer any opinion." Of the English corporations, the College of Physicians has no "comment" on the matter, the College of Surgeons has not had it under consideration, but remarks that is in conformity with the approved regulations for a Conjoint Scheme, and the Court of Examiners of the Apothecaries' Society encourage "the view, but have no power to *enforce* it." In Scotland, the College of Physicians has taken no steps in the matter, the College of Surgeons "incorporates in its rules a strong Recommendation to this effect," and the regulations and practice of the Glasgow Faculty are "conformable." In Ireland, at the Apothecaries' Hall, "the option of being examined in these subjects constitutes part of the preliminary examination, and questions on the subject are always set in the printed papers."

14 and 15. Recommend the requirement of certificates of practical instruction in vaccination, and that the certificates should be received only from teachers recognised by the Local Government Board. It appears that the practice of all the bodies is exactly, practically, or as near as may be, in conformity with the Recommendation. Some of the answers from the Irish bodies are curious: for the College of Physicians says that no such officer as a teacher recognised by the Local Government Board exists, while the Apothecaries' Hall receives certificates "only from the medical officers approved of by the Local Government Board"; and the practice of the University of Dublin "is in conformity with the Recommendation."

16. Gives the list of the subjects of professional education in which all candidates ought to pass before obtaining a registrable qualification. In England, the College of Physicians is in conformity, except with regard to Medical Chemistry and Chemical Physics, the College of Surgeons makes the same reply as to Recommendation 12, and the Society of Apothecaries is "conformable" except as regards Surgery; and the Universities are "conformable." In Scotland, the College of Physicians of Edinburgh and the Glasgow Faculty are "conformable," and the College of Surgeons refers to its reply to Recommendation 12; the practice of the Universities is also "conformable," or goes beyond the Recommendation. In Ireland, the College of Surgeons refers to its reply to Recommendation 12, and the other bodies comply, or include more subjects, except the College of Physicians, which does not examine in Surgery.

We must defer dealing with the replies to the rest of the Recommendations till next week.

THE GOVERNMENT AND VACCINATION.

During the course of the past week a deputation, consisting of Dr. Cameron, M.P., Dr. Bristowe, Dr. Alfred Carpenter, Mr. Ernest Hart, Dr. Norman Kerr, Dr. Ransome (Manchester), and Mr. Green (Birmingham), waited, on behalf of the British Medical Association, on Mr. Sclater-Booth, at Whitehall, for the purpose of enforcing their views on the subject of vaccination. This deputation may fairly be considered as the outcome of the recent discussion held under the auspices of the Association. The views thus imparted differ in only one important respect from those we have maintained for many years, which for nearly as long a term have been ignored by the managers of that body, until, in the fulness of time, it seemed to them a good move to advocate such views as originating in, and springing from, their own superior enlightenment. Be that as it may, the cause, as we have advocated it, is a good one, though it seems a hard matter to indoctrinate the official mind with the necessity for some reform in the existing laws and regulations affecting vaccination.

Herein, however, lies the difference between our views and those which the British Medical Association through its mouthpieces would enforce. We would have animal vaccination optional: they would make it nearly compulsory. We would have the present system maintained in an improved form: they would uproot it altogether.

Be that as it may, we strongly suspect that a paper by Dr. Ballard in this month's *Practitioner* constitutes the substratum of Mr. Sclater-Booth's reply to this deputation, though the paper contains some exceedingly interesting observations, which are essentially the fruits of Dr. Ballard's own experience. We may be excused, however, if meantime we limit our observations to Mr. Sclater-Booth's reply, inasmuch as clearly this will have the most important effect on the immediate future of the question. The speaker first addressed himself to the question of arm-to-arm vaccination and we are perfectly free to admit that this is the best way of vaccinating so as to insure success. But it is perfectly useless to say that this system can, under any manageable system, be universally applied to vaccination from the calf or heifer. And we would ask, is arm-to-arm vaccination even now universal or compulsory? If so, what would be the use of any system for the supply of healthy lymph to all parts of the country? Once fairly started, a supply can be for a time kept up, so as to enable arm-to-arm vaccination to be carried on, but in every man's practice a term comes to the number needing vaccinative protection, and in this way, if in no other, arm-to-arm vaccination must for a time be arrested. All that is asked is, that the Government should grant the same facilities for, and that Parliament should confer the same legality on, vaccination from the heifer as now exist in the case of humanised lymph. Mr. Sclater-Booth would throw the onus of supplying lymph from the heifer on the public; but this, we repeat, is unfair. Such a supply can be kept up for a time, especially when an epidemic of small-pox is threatened, and revaccination is in vogue, but experience has shown that in this country, and with the law as it is, the supply cannot be kept up continuously.

Mr. Sclater-Booth again misses the point entirely when he

says, "You have no confidence in the lymph supplied by the Local Government Board: would your confidence be any greater in that derived from the calf if supplied in the same way." The point is not what the Local Government Board itself does with regard to the lymph, but where the lymph comes from,—is it pure or impure? If from the calf, no trace of the dreaded impurity is possible. But till primary vaccination by means of lymph which can contain no trace of impurity is rendered possible, a just ground of complaint is afforded to all who are, or pretend to be, opposed to our vaccination laws.

Both Mr. Sclater-Booth and Dr. Ballard tell us that any alteration of the law in this direction would not greatly affect the numbers of those who remain unvaccinated, and that no alteration of the law would satisfy all. This, again, may be quite true, but still it is not the point for which we contend and have contended. What we say is that heifer vaccination would do away with an objection which is not founded on sentiment, laziness, or carelessness, but on sad experience. Dr. Ballard may contend that vaccine syphilis is very rare: fortunately it is, but how rare or how frequent no one can say. The reasons for this have been well explained by Mr. Hutchinson, who, certainly with one of the largest experiences in this direction, does not underrate the danger. Dr. Ballard seems to know of only one authenticated example of vaccine-syphilis. We venture to say that, had he as earnestly studied this side of the subject as he has certain others, his convictions would have taken a very different form. But the official mind, partly from habit, partly from unwillingness to study matters in new lights, is too often one-eyed, if not blind altogether.

THE MANCHESTER CHILDREN'S HOSPITAL CASE.

It is with much regret that we feel ourselves bound to return to the subject of Dr. Humphreys' suspension at the Pendlebury Children's Hospital, and still more regret that there has now been introduced into the controversy a degree of personality which ought to have been avoided had it been avoidable. The lay governors, with Mr. Cross at their head, have shown themselves so hopelessly incapable of appreciating the position and feelings of a gentleman, who, salaried or unsalaried, gives his best services to a hospital, that we may pass them by on one side. Unfortunately this cannot be done as regards Dr. Borchardt, who seems to have been their trusted counsellor and "Medical Director." The defence of the governors and the defence of Dr. Borchardt contain so many elements in common that we can hardly remain doubtful as to the source of the twofold inspiration. Disingenuousness is equally palpable in both; and though Dr. Borchardt's defence lacks what we have ventured to call the brutal cynicism of Mr. Cross, it has shown that he is not only equally responsible with other governors and members of the Board of Management for these proceedings, but, inasmuch as he appears to possess almost unlimited power with the Board, he becomes responsible in no ordinary degree for the various transactions which culminated in Dr. Humphreys being driven to resign. Nor can we help feeling that in some degree the conduct of Dr. Ashby and Mr. Jones requires, if not vindication, then explanation.

Dr. Borchardt, in his letter of defence, writes, in substance, that Dr. Humphreys, after twelve months' trial, had pleased the Board so little that—apparently with Dr. Borchardt's consent—a successor to himself as Medical Director having been advertised for, but not found, a managing committee was formed, and Dr. Humphreys was charged with the medical administration only. This sounds curiously when contrasted with the official praise of Dr. Humphreys in the annual report. At all events, at the end of another twelve months "some influential members of the Board considered it their duty to think of Dr. Humphreys' dismissal. When I [Dr. Borchardt] heard of a step like this I thought it was my duty, in Dr. Humphreys' and the Hospital's interests, to interfere,—[but only hearken how!]—and with the assistance of Mr. Thomas Jones, the House-Surgeon, it was arranged by the staff that Dr. Ashby, who had joined the medical staff only four months previously, should assume the post of Medical Administrator instead of his senior." This buffet, then, and this unbecoming sneer, were the work of Dr. Borchardt. He goes on to say—"In this arrangement, I was informed by my friend Mr. Jones, Dr. Humphreys concurred." Since when, we should like to know, has it been the practice in well-regulated hospitals for the house-surgeon to act as the go-between for the supersession of his superior officer? Since when, we should like to know, has it been the custom in any society of gentlemen for a junior officer to take the place of a senior without a personal explanation? But things seem to have been queerly managed at Pendlebury, even after Dr. Borchardt had "interfered in Dr. Humphreys' interest." Thus it is said by Dr. Borchardt that "some of the nurses in the wards under his (Dr. Humphreys') charge *complained to the Chairman of the House-Committee* that they did not receive clear and strict instructions from Dr. Humphreys with regard to his patients. What does this mean? Was the Chairman engaged in making inquiries behind Dr. Humphreys' back, or, as the words seem to imply, was the information volunteered by the nurses in question? On either supposition one might laugh at the idea of Dr. Humphreys being able, in any way he could possibly try, to farther "destroy the necessary discipline" of the Hospital.

It is plain, from Dr. Borchardt's own showing, and from his present position as "for the next twelve months Directing Physician of the Children's Hospital at Pendlebury," that he has acted as something more than an ordinary governor; that to that extent he is responsible for the behaviour of the Board to Dr. Humphreys—which, in other words, means that he has been, more largely than the other members of the Board, responsible for their mischievous action as regards a colleague who is at once a gentleman and a professional brother.

We should have been content to let all this pass had it not been for certain facts and accusations against Dr. Borchardt which have only been made public within the last week. The facts refer to the dismissal of a former medical officer of the Pendlebury Hospital; the accusations, to those brought against Dr. Borchardt by the gentleman thus unceremoniously got rid of. This gentleman—Dr. Rayne, a distinguished student of University College, London, who "had passed the examinations for the medical degree of the University of London in all cases with honours," and who moreover possessed testimonials of the highest character—was, unfortunately for himself, elected Assistant-Physician to the Pendlebury Hospital. He says: "Twelve months after my election the Committee took such action as resulted practically in my dismissal from the Hospital. I strove in vain to obtain a knowledge of the grounds upon which the Committee had acted. Beyond the fact admitted by the Chairman, that the action was entirely based on certain statements made by Dr. Borchardt at the board meeting, and into the truth of which no inquiry was made, I could learn nothing. I have remained in ignorance of the nature of these statements to the present time." To this letter, which appeared in the *Manchester Examiner* and in the *Manchester Guardian*, Dr. Borchardt replied, and, strange to say, neither contradicts nor alludes in any way to the above most damaging statement. He jauntily gets rid of the question by the elaborate

argument of an entirely side issue. We should have thought that one whose professional character was thus attacked would have made haste to clear it; but Dr. Borchardt seems to exhibit no such anxiety, and, in face of an absolute want of contradiction, we are reluctantly compelled to accept the statement of facts above given as correct. There is an ominous similarity between the refusal of any correspondence on the part of the Board with Dr. Humphreys, and this denial of justice —as far as any inquiry could give justice—to Dr. Rayne. To dismiss a medical officer to a hospital is surely a most serious matter, but to dismiss him without assigning any reason, and refusing to give any, is something very much worse; and if Dr. Borchardt is in any way responsible for such proceedings it will not do to ride the high horse with regard to past career or professional services. Such conduct, we hold, would be unbecoming in the meanest of our brethren: how much more so in one high in place and power! Further than this we cannot now carry the matter; but it seems to us that one or two lessons may well be deduced from these most unfortunate proceedings.

A cry was raised some time ago for the payment of the medical officers of general hospitals. To this view we were obliged to demur, and the occurrences now under discussion afford an illustration only too apt of our views on the matter. The medical officers at the Pendlebury Hospital are, comparatively speaking, highly paid. Had it not been so we venture to think that the Board would hardly have dared to act as they have done in the two cases to which reference has been made. Assuredly we should be glad enough to see hospital physicians and surgeons paid as they merit, but we would not have them lose that position which purely honorary appointments give. The keynote to the proceedings in connexion with the Pendlebury case was struck when Mr. Cross grouped the whole of the staff servants and everybody else as "officials" together.

Another point illustrated is likewise one which we discussed not long ago—the good and the evil of a medical autocracy in any hospital or such-like institution. We might perhaps say "evil" alone, for but little "good" can come of any such autocracy, save the ready means it affords of relegating responsibility to the right quarter. Had Dr. Borchardt been in such harmony with his colleagues as he ought to have been, no such occurrences as we have had to consider could have happened. But what does Dr. Borchardt himself say? "During the last twelve months I never spoke to Dr. Humphreys, never entered his ward, never looked at a single case under his care." Surely this shows a loose screw; but when nurses complain to a lay-chairman of the incapacity of the physician set over them, and when the consulting physician never exchanges a word with the senior physician of the institution with which he is connected, any *contretemps* may happen, and we need be surprised at nothing in the history of its domestic affairs.

THE WEEK.

TOPICS OF THE DAY.

It is not often that the annual report of an unendowed hospital can furnish such satisfactory financial reading as the annual report of the Royal Free Hospital for the past year, which was submitted at a general court of the governors, held last week. It showed that the receipts for the year from all sources amounted to £31,861, being the largest sum ever received in one year since the foundation of the institution. One legacy alone had realised the handsome sum of £20,000, and, practically, at the end of the year the Hospital may be said to have been free from debt. The total ordinary expenditure for the year amounted to £8601.

A General Order under date of the 1st of the present month has been issued by the Horse Guards, which provides that exchanges between officers of the Army Medical Department at home and foreign stations will be permitted to the same extent as in the case of combatant officers, under the qualifying conditions as to promotion specified in Articles 15, 18, and 21 of the Royal Warrant for the Department of November 27, 1879. But, except under special circumstances, exchanges between medical officers serving in the United Kingdom will not be permitted unless the officers have been at least two years at their respective stations.

It is always satisfactory to find that the law has been not quite vainly invoked to punish abortionists. At the Leeds Assizes last week a female herbalist, forty-eight years of age, was indicted for the murder of a servant-girl, who, being pregnant, had been induced to visit her at the instigation of the seducer. A post-mortem examination showed that abortion had been procured, and that this was the cause of death. Mr. Justice Hawkins minutely analysed the evidence in his summing-up, and told the jury that if they found that the female prisoner had, in the prosecution of a felony which was in itself dangerous to life, caused the death of the woman, this would be murder. The jury, however, after a lengthy deliberation brought in a verdict of manslaughter only, and sentence was deferred.

The Committee of the British Medical Association appointed to consider the subject of Habitual Drunkards, and the Committee of the independent society formed to promote legislation in this direction, have determined to endeavour to establish, by voluntary effort, an institute for the purpose of treating inebriates according to the provisions of the Habitual Drunkards Act, 1879. The institute, when established, is to be supported by payments from the patients, and it is proposed to call it the Dalrymple Retreat for the Treatment of Inebriates. The special Committee includes the names of Dr. A. Carpenter, Mr. C. A. Govett, Dr. N. Kerr, and Mr. S. Alford. At a recent meeting Mr. Alford read a paper on the new Act, suggesting how it should be administered, and giving an account of a visit to the American inebriate homes. The discussion which followed closed with the adoption of the following resolution, moved by Mr. Holthouse, and seconded by Dr. Hardwicke:—"That to establish a home for the treatment of habitual drunkards, in which it is proposed that the managing committee shall have no pecuniary interest, appears to be the best way by means of which the Habitual Drunkards Act 1879, is likely to be made useful. This meeting therefore recommends the Society by whose means the Act was obtained to proceed with the course which they propose to undertake, and that the term 'Dalrymple Retreat' appears to be an appropriate name for the same."

Mr. Payne, the coroner, recently held an inquiry at Guy's Hospital touching the death of a gentleman, aged fifty-eight, who suddenly expired on one of the platforms of the London-bridge Terminus through the bursting of a bloodvessel. It was stated in evidence that the deceased was seen by the medical officer of the Hospital within five minutes of his falling to the ground, the Brighton Railway Company having an ambulance within easy access of all their servants for the speedy conveyance of persons to the Hospital in cases of emergency. We cordially agree with the coroner in the satisfaction he felt in hearing that such an excellent arrangement exists at that station, and in his expression of the hope that the various railway companies in the metropolis would take steps to have ambulances placed at their principal stations in and around London, as an injured person's recovery might frequently depend in a great measure on the way in which he or she was conveyed to the hospital. The jury

endorsed the coroner's remarks, and returned a verdict of "Death from natural causes."

We have to record the death of the Rev. Henry Moule, M.A., vicar of Fordington, in Dorset, whose name was closely identified with the cause of sanitary reform, he having been the author of several pamphlets on drainage and water-supply. He was, however, perhaps better known, and will be best remembered, as the inventor of the dry-earth closets which bore his name. He had reached the advanced age of seventy-nine, and was a staunch and consistent teetotaler in practice. His funeral was attended by Dr. Blaxall, representing the Medical Department of the Local Government Board. Further elaborating the Rev. Henry Moule's idea, Mr. Geo. Barnard proposes to solve the difficulties of the sewage question by the introduction of a system which he calls the Earth Column. The plan is to separate the liquid from the solid sewage by a series of filtrations through earth, which would have the effect of passing off the former to the sewers in a nearly purified state, and of retaining the latter in a fit state to be employed for agricultural purposes. The idea is certainly ingenious, but its practicability requires to be tested before any definite opinion can be offered as to the wisdom of adopting it.

The sudden death is recorded of Dr. Skelton, a well-known medical practitioner of Plymouth. He had called in at a shop to pay a small account, when he was seen to stagger and fall heavily. Dr. Thomson was immediately summoned, but death had been instantaneous, presumably from heart disease. Dr. Skelton was born in 1806, and studied at St. Bartholomew's Hospital. In early life he practised first in London, and after that in the North of England; but he was perhaps best known from the efforts he made in his earlier days to spread a knowledge of the laws of health and elementary medicine among the people.

The campaign against the sale of unwholesome meat is being vigorously carried on—in some places, at least. The following is the experience of one day's work at Wolverhampton:—On Saturday last, at the police-court of that town, a man described as a "Derby butcher," on account of his selling cheap meat for the working classes, was fined £5 and costs for having had in his possession some mutton and sheep's heads from animals that had been affected with "rot." Another butcher was subsequently fined 40s. and costs for having had a "rotten" sheep dressed for human food. The same day two carcases of "rotten" sheep were seized by the sanitary authorities and destroyed. It was stated in court that "rotten" sheep were being sold in the town at 4s. per head. At the police-court of the same town on the previous day, a large wholesale bacon and provision dealer was fined 5s. each for forty bad Canadian hams which had been seized upon his premises by the sanitary authorities; and a butcher was fined £1 each for three sheep that had been affected with "rot," and the carcases of which he dressed for human food.

At the usual fortnightly meeting of the Metropolitan Asylums Board, held last Saturday, a question was raised as to the advisability of moving boys suffering from scarlet fever from the training-ship *Shaftesbury* to the Homerton Asylum; and it was eventually resolved to inform the London School Board that cases of illness arising on the *Shaftesbury* could not legally be received at the metropolitan asylums, and to request them to make arrangements for dealing with such cases in future. Sir E. H. Currie stated, for the information of the parishes whose imbecile patients could not, from want of room, be taken into Caterham or Leavesden, that in two months the adult asylum now being built at Darenth would be opened for the reception of female patients. The report from the Stockwell Asylums showed that 67 fever patients had been admitted in the past fortnight, 7 had died, and 54 had been discharged, leaving 221, of whom 3 were typhus, 208 scarlet, and 10 enteric fever patients. At Homerton, 50 fever patients had been received in the fortnight, 9 had died, 76 had been discharged, leaving 164, of whom 132 were suffering from scarlet and 32 from enteric fever. Sir E. H. Currie suggested that inquiries should be made regarding the districts whence fever patients came so regularly, so as to gain information regarding defective habitations which contributed patients to the rate-supported asylums. In all 120 fever patients had been sent into the asylums, against 122 in the previous fortnight, and there was a decrease of 34 in the number remaining under treatment. It was announced that the small-pox asylums at Stockwell and Homerton, which have been used for the reception of enteric fever cases, will be restored to the purposes for which they were built, and that the Deptford Hospital will be used in their stead. The number of small-pox cases received at Fulham and Deptford during the fortnight has been 56; 13 have died and 34 have been discharged, leaving 91 under treatment, or an increase of 9 on the last returns.

The difficulty at the Dover Hospital, which had caused all the medical staff of that institution to resign their appointments, has been terminated by the governors voting by a large majority that the Resident Surgeon shall not engage in private practice in the town until he has held his office for a period of five years.

The district of Okehampton would appear to be in a bad way. At a recent meeting of the inhabitants, specially convened to discuss the advisability of obtaining a second medical man for the place, and reported in the *Western Daily Mercury*, a resolution expressive of regret and dissatisfaction that the district was supplied with the services of only one medical practitioner was ultimately carried by a majority, though not until there had been proposed, seconded, and supported an amendment which declared that a second veterinary surgeon was more needed than another medical practitioner. The relevancy of the amendment is not evident on the surface, but inasmuch as it deals only with the comparative and not with the absolute necessity for additional means of procuring medical advice, it was perhaps brought forward as a kind warning to any recently qualified gentleman who might have inferred from the original resolution that in this district of Okehampton there lay, ready to hand, a lucrative practice. For, as a correspondent points out, though two lawyers may make a livelihood where one would starve, the same cannot, as a rule, be expected in the case of medical practitioners.

MEDICAL AND SANITARY LEGISLATION.

The Government this year introduced their Medical Act Amendment Bill into the House of Commons at once, in order that it might without delay be referred to the Select Committee on the Medical Bills, which Committee was to be reappointed. The Bill was brought in by Lord George Hamilton, and read a first time, on Tuesday, the 10th, and it stood for the second reading in the orders of the day on the 11th. But it has got no further. Ireland and her Majesty's faithful Opposition have delayed the progress of business in the House of Commons so effectually that the Address in reply to the Queen's Speech has not yet been got rid of. Dr. Lush's Medical Bill has been read a second time; but it stood first on the orders of the day on Wednesday, and was not opposed, so that there was time for it to be read before six o'clock. But Mr. Plunket had given notice of an amendment to the other Medical Bill, and the Irish Volunteer Corps Bill stood before it in the orders. Mr. Mills' Medical

Act Amendment Bill has also been introduced, and Mr. Errington's Bill to amend the law relating to the Qualifications required for holding certain Medical Appointments is to be brought forward. The Lord Advocate has introduced an "Artisans and Labourers' Dwellings Improvement (Scotland)" Bill; and several other measures in which the medical profession will feel a special interest have been, or are to be, introduced.

THE EXTRAORDINARY DEATH-RATE OF LAST WEEK.

The death-rate in London for the week ending Saturday, February 7, reached the extraordinary figure of 48·1 per 1000. This excessive mortality in the metropolis is the more striking as none of the English provincial towns reached a higher death-rate than 32 per 1000 for the same week, while the average rate for the nineteen provincial towns whose vital statistics are published weekly by the Registrar-General was not more than 26·3 per 1000. The cause of this terrible mortality—unrivalled among us except in cholera times—is not far to seek. With cold weather we have always an increase of deaths amongst the aged; but when we have both fog and cold, all *poitrinaires* suffer more or less, and if both causes are at work in an unusual degree, as they were last week, the mortality is correspondingly great. The only time when anything of the kind occurred in recent days was in 1873, during the Cattle Show week: then the death-rate was 37·5. But though the fog was then, if possible, more intense and oppressive, the period during which it lasted was shorter.

THE LIVERPOOL WATER SCHEME.

On Tuesday last a deputation from various public bodies in the watershed of the river Severn, accompanied by Lord Beauchamp, Lord Hampton, and several members of Parliament, had an interview with the President of the Local Government Board with reference to the scheme proposed for supplying Liverpool with water. Lord Beauchamp, in introducing the deputation, dwelt on the great importance of the matter, as regards the trade of the Severn and its fisheries, and, especially, the sanitary questions involved in there being always an adequate supply of water for the population living on its banks; and contended that if Liverpool were permitted to take the whole of the watershed, this would in the future interfere with any comprehensive scheme for dealing fairly with water-supply as a national question. Sir Baldwyn Leighton also dealt with the national bearing of the matter, and argued that there are only two watersheds in England available for a national supply, viz., Cumberland and North Wales, and that by this scheme Liverpool would monopolise one of the two, to the prejudice of the rest of the country. And Mr. Pierce, the President of the Liverpool Land and House Owners' Association, declared that a large number of the ratepayers of Liverpool are opposed to the scheme on the grounds that, there is sufficient supply of water for the next twenty years, and that, if necessary, Liverpool could get a supply by tapping the water that will come to Manchester under the Thirlmere scheme. The President of the Board, in reply, admitted the great importance of the subject, and, among other things, said that he did not think the public bodies of the watershed of the Severn would act wisely in asserting any right to a monopoly of the water. They had undoubtedly a right to expect that their interests, whether as regards trade, or navigation, or water-supply, should be distinctly reserved and secured; but, that done, it would be hard to say that so important a place as Liverpool might not also be served with regard to the most pressing needs of its population; and he was informed that Liverpool is in urgent need of an additional supply of water. He allowed that it is, however, a great question for Parliament and the Government whether such a scheme as the Liverpool one should be sanctioned; and he promised that the representations made by the deputation should be submitted to the Government, with the view of their considering whether it would be their duty to take any special action in the matter.

THE NAVAL AND MILITARY MEDICAL SERVICES.

About one hundred candidates presented themselves at the examination that has been held during the week for commissions in her Majesty's Indian Medical Service, in the Medical Department of her Majesty's Army, and in the Medical Service of the Royal Navy. Fifty-three out of the hundred candidates compete for the declared twenty-three vacancies in the Indian Service. About forty seek commissions in the Army Medical Department; and five only wish to enter the Naval Service—a highly significant fact, which the authorities at the Admiralty will do well to take earnestly to heart. We hear that a large proportion of the candidates for the Army Medical Department come from the Irish schools.

ROYAL COLLEGE OF SURGEONS.

The following gentlemen are candidates for the Examinerships in Anatomy and Physiology respectively, at the above institution, in the vacancies occasioned by the resignations of Messrs. J. Wood, F.R.S., and J. W. Hulke, F.R.S., viz.:—In Anatomy, Messrs. Edward Bellamy, of the Charing-cross Hospital; Richard Davy, of the Westminster Hospital; H. Greenway Howse, of Guy's Hospital; and John Langton, of St. Bartholomew's Hospital. For Physiology there are at present only two candidates, viz., Messrs. Jeremiah McCarthy, of the London Hospital, and Walter Pye, of St. Mary's Hospital. The "Committee on Examinations in Anatomy and Physiology" will meet at the College on Tuesday next, the 17th inst., when it is expected other gentlemen in addition to the above will be nominated for these appointments. Messrs. Wood and Hulke are members of the Court of Examiners.

MR. W. H. POWER'S REPORT ON SCARLATINA-PREVALENCE IN THE EASINGTON RURAL SANITARY DISTRICT.

The continued prevalence of scarlatina in the Easington Rural Sanitary District, with very fatal results, determined the Local Government Board to institute inquiries on the subject, and for this purpose Mr. W. H. Power was despatched to the locality towards the latter end of the past year. The Easington District is described as being situate on the eastern limits of the Durham coal-field; the population, between 30,000 and 40,000, principally employed in the local collieries, are congregated in the colliery villages attached to the different pits, the main portion of the property in every instance belonging to the colliery proprietors, who are fairly anxious to contribute by all means in their power towards the sanitary condition of the people. The older dwellings in these villages, built from thirty to forty years ago, are unquestionably very defective; but all the new buildings show that increasing regard is given to improvement of house-accommodation for the collier class. The annual death-rate of the Easington District from scarlatina for the ten years 1851-60 attained 15 per 10,000 of the population, and for the next decade was even higher, reaching 21 per 10,000—a mean rate for the whole period more than double that of England and Wales. Since 1870, scarlatina, continuously present in the district, has twice attained epidemic prevalence; in 1873-74-75 it caused 193 deaths, and subsided in 1876. The recent epidemic of this disease began early in 1877, in which year it caused 81

deaths, or from 20 to 26 per 10,000 of the population. In 1878 it was even more fatal, 91 deaths resulting from it. During 1879 the fatality of the disease somewhat declined, but even then up to June there were 26 deaths; throughout the epidemic the incidence of fatal scarlatina was almost wholly on the colliery villages, and the attacks were almost entirely confined to young children, principally those under five years of age. Indeed, it is almost an article of faith with the colliery people themselves that grown-up persons do not get attacked: and there is probably in this district one reason for their belief, for, from the repeated and sustained prevalence of scarlatina in these colliery villages, a large proportion of the older children and adults have acquired protection by previous attack; so that each epidemic of the disease finds victims mainly among the children born since the previous outbreak. As to the source of the epidemic and the precise method whereby each of the colliery villages became invaded, Mr. Power observes, there is nothing to be said; herein are involved circumstances occurring and conditions obtaining many months or even years ago, and which could not, therefore, at the date of inspection be usefully studied. No difficulty, however, was met with in obtaining abundant evidence as to the existence of means by which the infection when once introduced into the colliery villages might readily extend among the inhabitants. The habits of the colliers and the conditions under which they live are such as well-nigh to insure to every susceptible person repeated opportunity for acquiring any current infection. Indeed, the collier class, seeing scarlatina habitually attack their children within a year or two of birth, have come to look upon it as pertaining, as a matter of course, to childhood, just as much as dentition. Hence have arisen an utter disregard of the commonest precautions against infection, and even a disposition to court it, due in some measure to a dim perception of the truth that disease of this sort, if it attack a young child without killing it, is less likely to attack that child as he grows up; whence the disease may have come to be regarded (the cost in life and suffering being overlooked) as something which had better be got over before the wage-earning period of life begins. Remonstrance by medical men and others is utterly unavailing to prevent repeated association of the healthy and the sick; and it would seem that no measures short of the compulsory removal to hospital of the earliest cases of infectious disease can be trusted to check rapid extension of any imported malady. Mr. Power concludes his report with the necessary recommendations for the improvement of the district; but he thinks that the best means to be adopted would be to give the population the utmost facility to isolate their sick in appropriate buildings, and to endeavour to teach them better habits by showing the different behaviour of disease there, and in their own cottages.

THE HOLSWORTHY RURAL SANITARY AUTHORITY.

The sixth annual report of Mr. Linnington Ash, Medical Officer of Health to the Holsworthy Rural Sanitary Authority, for the year ending December 31 last, does not exhibit any improvement in the health of the locality. The death-rate for the year is given as 21·2 per 1000 persons living, which cannot but be looked upon as excessive, when it is stated that the entire population is under 10,000, with a density calculated at 1 to 8·75 acres. Moreover, the district is an elevated moorland on the borders of Dartmoor, and Mr. Ash himself confesses that the death-rate (which is nearly the same as that of 1878, both being greatly in excess of the mean for six years, which is 17·5 per 1000) "leaves no room for satisfaction." The causes of the exceptional rate of mortality in this district are those which are common to most rural districts, and are apparently well known to the Medical Officer of Health, since his report remarks, "There are four classes of sanitary defects generally prevalent throughout the district; deficient and defective water-supply; bad drainage, or none at all; absence of sufficient privy accommodation; and bad cottages, habitations, and dwellings." All these defects have from time to time been brought to the notice of the Sanitary Authority by Mr. Ash, but his report does not add that any vigorous steps have been taken for their removal. The district is a very poor one, and sadly deficient in funds to expend upon public improvements, whilst the population is so scattered that any works undertaken at any given spot would benefit only a limited number of inhabitants.

STEEVENS' HOSPITAL, DUBLIN.

On Thursday, February 5, the governors of this institution met for the election of a Consulting Physician in the room of the late Dr. William M. Burke, and of two Visiting Physicians in the room of Dr. T. W. Grimshaw, Registrar-General (resigned), and of the late Dr. Bookey. Dr. Grimshaw was elected Consulting Physician; Drs. Henry Colpoys Tweedy and Richard H. Hayes were elected Visiting Physicians by a large majority of votes.

THE LATE DEPUTY SURGEON-GENERAL PORTER.

We understand that it is proposed to place a memorial in the Chapel at the Royal Victoria Hospital, Netley, to this officer—who died, as our readers know, as Principal Medical Officer of the Cabul Field Force, at the Sherpur Cantonment, on January 9,—in consideration of his high professional and departmental reputation and his very estimable personal character. The following officers have been nominated as a committee to carry out the necessary arrangements:—Surgeon-General T. Longmore, C.B., President; Surgeon-Major R. Tobin, Treasurer; Surgeon-Major J. Lane Notter, M.D., Honorary Secretary.

THE APPOINTMENT OF PHYSICIAN TO THE QUEEN IN IRELAND.

Many rumours are afloat as to who is likely to be selected to succeed the late Sir Dominic Corrigan as Physician-in-Ordinary to her Majesty the Queen in Ireland. Among those spoken of as probable recipients of this honour are Dr. Head, the President of the King and Queen's College of Physicians; Dr. Banks, and Dr. Gordon, both ex-Presidents of the College; Dr. Lyons, a distinguished Fellow of the College, and Professor of the Practice of Medicine and Pathology in the Catholic University, Dublin; and Dr. B. G. MacDowel, late Professor of Anatomy and Chirurgery in the School of Physics, Trinity College, Dublin. All are very good men, but from what we have heard on the matter we are led to think that it is most generally expected that Dr. Banks will receive the appointment. Dr. Banks was formerly King's Professor of the Practice of Medicine, and Clinical Professor at Sir Patrick Dun's Hospital, and is Physician to the Richmond, Whitworth, and Hardwicke Hospitals. He has long held a prominent position, professionally and socially, and is highly popular among all classes; and any honour conferred on him by Her Majesty would give universal satisfaction.

FURTHER OBSERVATIONS ON QUEBRACHO BARK.

Dr. Penzoldt's discovery (*Medical Times and Gazette*, vol. ii. 1879, page 35) that various forms of dyspnœa can be alleviated by quebracho bark, receives confirmation from two recent writers in the *Berliner Klin. Wochenschrift*, No. 52, 1879—Dr. Berthlod, of Dresden, and Dr. Picot, of Carlsrühe. By both, Penzoldt's extract (referred to in our former notice) was rigidly adhered to. Dr. Berthlod relates two cases of spasmodic asthma which were much benefited

by the new drug. In the first the respirations fell after three doses from 64 to 30, with general improvement of the symptoms; in the second, where the asthma depended on emphysema, the effect was less rapidly produced; but the patient, who had been under Dr. Berthlod's care for four years, and who generally had to lie up for one or two weeks at the time of his attacks, was about again in five days. In a case of mitral incompetence and stenosis, quebracho relieved the severe nocturnal dyspnœa most decidedly; in two advanced cases of fatty degeneration of the heart it also did good, but digitalis had to be given for the relief of œdema, over which the quebracho exerted no influence whatever. Dr. Berthlod, however, from his small experience is inclined to regard the latter drug as indicated in cardiac disease when the pulse becomes irregular under the action of digitalis, and when orthopnœa continues after the digitalis has been omitted. In one or two cases of chronic bronchitis, and in several cases of phthisis in the later stages, the drug proved unsatisfactory; in two patients with phthisis, however, it relieved the dyspnœa wonderfully. In one of these the respirations fell from 52 to 28 after teaspoonful doses of the extract every two hours. Dr. Picot not only gave quebracho with good results to three patients with catarrhal pneumonia, bronchial asthma, and cardiac disease, dyspnœa being in each an urgent symptom, but he experimented on himself with it as to its effect in diminishing shortness of breath in climbing hills. On three following days, the temperature and height of barometer remaining nearly unaltered, he ascended the same height in the same period of time. On the first day, without quebracho, his respirations rose from 16 to 42, his pulse from 64 to 94. On the second day, half an hour before starting, he took fifteen grammes of Penzoldt's extract, and reached his destination with respirations at 30 and a pulse of 80, feeling also in every way easier, as was further proved by his being able to smoke during the ascent, which he could not at all manage the day before. On the third day, without quebracho, his symptoms corresponded to those of the first day. He has also seen good results in two persons without evident organic disease, but liable to breathlessness in walking fast. We must not omit to mention that, according to the *Wiener Med. Blätter* (No. 41, 1879), Professor Skoda, of Vienna, has not only found benefit himself from quebracho, but has prescribed it for others with success. It is possible that as an astringent in diarrhœa the resinous residue of the bark, which is only soluble in alcohol, may be of service. Dr. Berthlod noticing that the diarrhœa of a phthisical patient stopped while taking quebracho, has tried the resin in acute and chronic intestinal catarrh with good results. To children he gives 0·1 gramme in a pill, of which they take ten daily. English children, however, might object to the number prescribed.

THE LATE SIR DOMINIC J. CORRIGAN, BART.

At a meeting of the King and Queen's College of Physicians in Ireland, held on Friday, 6th inst., it was unanimously resolved—"That the President and Fellows desire to record their deep sense of the loss sustained by this College, by the profession of medicine, and by the country at large, through the death of Sir D. J. Corrigan, Bart., who filled so distinguished a place in the history of the College; and that the College tenders its profoundest sympathy and heartfelt condolence to Lady Corrigan and the other members of the family." At a meeting of the Obstetrical Society of Dublin, held on Saturday evening, February 7, in the Hall of the King and Queen's College of Physicians, the President, Professor Sinclair, alluded to the recent death of Sir Dominic Corrigan. Through his energy and perseverance the College of Physicians obtained the magnificent building in which by their permission the Obstetrical Society were now assembled. It was not the occasion to speak of the professional eminence and abilities of Sir Dominic Corrigan, which had been referred to already. The Rev. Dr. Haughton moved a resolution expressive of the Society's sense of the great loss the medical profession had sustained by the death of Sir Dominic Corrigan, and of their sympathy with Lady Corrigan and the other members of the deceased baronet's family. Although Sir Dominic Corrigan was not a member of that Society, it was well known that he felt a deep interest in everything that related to the advancement of the medical profession. Dr. MacSwiney, in seconding the resolution, said that Sir Dominic Corrigan, as a member of the great historic body of Irish medicine, sympathised with every one of the sections into which it was necessarily subdivided. The resolution was passed unanimously. A similar resolution was adopted by the Pathological Society of Dublin at the meeting of Saturday, February 7.

PATHOLOGICAL SOCIETY OF DUBLIN.

At the meeting of this Society on Saturday, January 31 (Dr. E. H. Bennett, President, in the chair), Dr. A. W. Foot showed a specimen illustrative of the effects produced on the urinary organs by a myoma of the prostate gland. The growth sprang from the postero-superior portion of the gland in a man aged fifty-eight years. The kidneys were nearly double the usual size, each weighing ten ounces. Their surface was studded with superficial abscesses, while the cortical substance was also the seat of numerous abscesses with ragged edges and irregular outline. This was perhaps the *pyelo-nephritis parasitica* of Klebs. The urine was that of chronic cystitis—alkaline, offensive, ropy, and loaded with mucus and phosphates. There was a large abscess-cavity between the bladder and rectum. The bladder was much thickened and fasciculated; the ureters were dilated; the kidneys were sacculated. Mr. Thornley Stoker exhibited several of the viscera of an army pensioner, aged twenty-eight years, who had had syphilis seven years before, and who was admitted to the Richmond Hospital suffering from abdominal aneurism and supposed chronic renal disease. The urine was frequently passed, was abundant, pale, and of persistently low specific gravity; however, no albumen was detected. Epileptiform seizures occurred from time to time. Numerous retinal hæmorrhages were found on ophthalmoscopical examination. Mr. Stoker believed the patient to be an epileptic lunatic. The brain was sclerosed and bloodless. The left ventricle of the heart was hypertrophied. The kidneys, however, were practically healthy. The aneurism had ruptured near its lower edge; it engaged the anterior and lateral walls of the aorta just below the diaphragm, extending downwards one inch below the superior mesenteric artery. Deposits, believed to be syphilitic, were found in the walls of the aorta, and the aneurism was, no doubt, the outcome of such a diseased condition. The President showed an example of incomplete fracture of the bones of the forearm ("green stick fracture") in a tall, strong man of twenty-one years of age. The arm had been caught in machinery in rotation, and the whole body had been whirled through the air by the entangled arm. One fracture of the ulna, two fractures of the radius—all incomplete, and of the first form of the "green stick fracture" of Professor R. W. Smith—had occurred. The fractures had been reduced during life, and that of the ulna rendered complete, while the radial fractures had been straightened without completion. The patient sank from secondary arterial hæmorrhage.

CHARING-CROSS HOSPITAL.

The fifty-ninth annual general court of the governors of this Hospital was held in the Board-room of the Hospital on Wednesday, the 11th inst., Henry Anstey Bosanquet, Esq., one of the treasurers, in the chair. The report stated that 1648 in-patients and 16,197 out-patients were admitted to treatment during the year 1879, and that of the total number 5277 were cases of accident and emergency. The past year, though more satisfactory than 1878, had not been a very prosperous one. Lord Overstone had, on account of advanced age, resigned the office of President, and his Royal Highness the Duke of Edinburgh, K.G., had graciously consented to accept the office, and will preside at a festival dinner in aid of its funds to be held in the spring of the present year. Amongst the deaths during the year the Council had to deplore the loss of Mr. Henry Hancock, Consulting Surgeon to the institution, and formerly President of the Royal College of Surgeons of England. The nursing and the domestic arrangements were still confided to the Sisterhood of St. John, which is presided over by the Bishop of London, and had, as heretofore, been carried on to the entire satisfaction of the Council. Attention was called to the necessity of removing the mortuary buildings from their present close proximity to the Hospital, and providing new and well-arranged premises for the medical school, the existing premises being altogether inadequate for the wants of the students. The first part of the new school building had been commenced, and would be ready for occupation by October next. If adequate funds for the purpose could be provided, the second part would be commenced at Midsummer next, and the whole building be completed in the spring of 1881. Contributions amounting to £7085 had been received, and £1273 promised. The further sum required was about £2000.

Cost of the Russian Plague.—It will be of interest to make known some of the details of the "budget" of the plague of Astrachan, and of the measures taken to prevent its recurrence. The epidemic, which was near cutting off Russia from the rest of Europe, cost altogether about two million francs, the expenses being calculated from January, when General Loris Mélikoff was named Governor-General, until April, when all danger had disappeared. The sanitary cordons and quarantines cost 100,000 fr.; the watching and isolating suspected places on the Volga, 60,000 fr.; the medical *personnel* and payment of *employés*, 250,000 fr.; medicines, etc., 90,000 fr.—*Lyon Médical*, February 1.

Poisoning by Stramonium Seeds.—Dr. Ströhmberg (*Petersburg. Med. Woch.*, December 13) relates that four children, from three to seven years of age, were brought into his hospital, having eaten a great number of the seeds of the *datura stramonium*, which were in a completely developed condition, although not ripe. In all the children the pupils were greatly dilated, the face very red, and the pulse much quickened, and they were all unable to walk. Two of them sat silent and trembling, while two others from time to time uttered screams and suffered from severe clonic convulsions; and all but one were unable to understand or reply to questions. The stomachs of all the children were thoroughly washed out, and in only one of them, five years of age, did the subsequent symptoms excite alarm. In this child the surface was dry and hot, and the pulse very rapid and filiform. The entire voluntary muscular system was so affected by constant clonic convulsions that the child had to be held in bed. The eyes were wide open, with excessively dilated pupils, and there was complete unconsciousness. After a time the breathing became stertorous and the pulse irregular. The child being in imminent danger, it was resolved to try the antagonistic effect of morphia, and one-tenth of a grain of the acetate was administered, and in the course of an hour the child took a third of a grain—that is the maximum quantity for twenty-four hours at this age. No sleep was produced, but the symptoms gradually abated and complete recovery ensued.

RECOMMENDATIONS OF THE GENERAL MEDICAL COUNCIL, ON EDUCATION AND EXAMINATION.

1. That it be recommended to the licensing boards not to accept the certificate of proficiency in general (preliminary) education from any of the bodies, the names of which are contained in the list annually circulated, unless such certificate testify that the student to whom it has been granted has been examined in the following subjects:—(1) English Language, including grammar and composition; (2) Arithmetic, including vulgar and decimal fractions; (3) Algebra, including simple equations; (4) Geometry, first two books of Euclid, or the subjects thereof; (5) Latin, including translation and grammar; (6) also one of these optional subjects: Greek, French, German, elementary Mechanics of solids and fluids—meaning thereby mechanics, hydrostatics, pneumatics, and hydraulics.

2. That it is desirable that the examination in general education be left to the Universities, and such other bodies engaged in general education and examination as may from time to time be approved by this Council; and that it be delegated to the Executive Committee to communicate with the licensing bodies on the subject.

3. That it be recommended to the various licensing bodies to instruct their examiners in professional subjects to report to them any cases in which decided ignorance in the subjects of general education has been displayed by the candidates, with the name of the board or boards before which the preliminary examinations have been passed; and that the licensing bodies be requested to transmit such reports to the Registrar of the General Medical Council.

4. No medical student shall be registered until he has passed a preliminary examination, as required by the General Medical Council, and has produced evidence that he has commenced medical study.

5. The commencement of the course of professional study recognised by any of the qualifying bodies shall not be reckoned as dating earlier than fifteen days before the date of registration.

6. The several branch councils shall have power to admit special exceptions to the regulations as to registration for reasons which shall appear to them satisfactory.

7. The several qualifying bodies are recommended not to admit to the final examination for a qualification under the Medical Acts any candidate (not exempted from registration) whose name has not been entered in the Medical Students' Register at least forty-five months previously. In the case of candidates from other than schools of the United Kingdom, the branch councils shall have power to admit exceptions to this recommendation.

8. That the age of twenty-one be the earliest age at which a candidate shall obtain a licence to practise, and that the age shall, in all instances, be duly certified.

9. That no licence be obtained at an earlier period than after the expiration of forty-five months subsequent to the registration of the candidate as a medical student.

10. That the course of professional study required for a licence shall occupy at least four years, of which at least three winter and two summer sessions shall be passed at any school recognised by any of the licensing bodies mentioned in Schedule (A) of the Medical Act.

11. That it is undesirable that any teaching or licensing body should insist on the student taking more than one course of lectures on any one subject.

12. That the following are the subjects, without a knowledge of which no candidate should be allowed to obtain a qualification entitling him to be registered:—1. Chemistry, including a knowledge of the principles of chemistry, and of those details of the science which bear on the study of medicine; and Chemical Physics, meaning thereby heat, light, and electricity. 2. Anatomy. 3. Physiology. 4. Materia Medica and Pharmacy. 5. Pathology, including morbid anatomy. 6. Medicine, including medical anatomy, clinical medicine, and therapeutics. 7. Surgery, including surgical anatomy and clinical surgery. 8. Midwifery. 9. Forensic Medicine.

13. That the Council will view with approbation any encouragement held out by the licensing bodies to students

to prosecute the study of the natural sciences before they engage in studies of a strictly professional character.

14. That a certificate be required, by each licensing body, from every candidate for its degree, diploma, or licence to practise medicine or surgery, that he has studied vaccination under a competent and recognised teacher; that he has himself performed the operation successfully under the teacher's inspection; that he is familiar with the different stages of the vaccine vesicle, and with the methods of preserving lymph; and that he is thoroughly informed in every necessary part of the subject.

15. That such a certificate should be received by any licensing body only from an institution where the appointed teacher of vaccination is recognised by the Local Government Board.

16. That it is desirable that the different licensing bodies, whether singly or in combination, should frame their examinations so as to secure that the knowledge of every practitioner whose name appears on the Register shall have been tested in all the subjects of professional education which the Council has determined to be essential, viz.:—1. Chemistry, including a knowledge of the principles of chemistry, and of those details of the science which bear on the study of medicine; and Chemical Physics, meaning thereby heat, light, and electricity. 2. Anatomy. 3. Physiology. 4. Materia Medica and Pharmacy. 5. Pathology, including morbid anatomy. 6. Medicine, including medical anatomy, clinical medicine, and therapeutics. 7. Surgery, including surgical anatomy and clinical surgery. 8. Midwifery. 9. Forensic Medicine.

17. (*a*) That there be in future three professional examinations. (*b*) That the professional examinations be arranged in two divisions; the first division to embrace the more elementary subjects. The first division may be completed at or before the close of the second year of professional study, but the second division not till the expiration of two years after the passing of the first division, nor before the completion of the fourth year of study. That the examinations, and the subjects included in each, be such, and in such order, as may insure, so far as possible, a due continuity and sequence of study.

18. That the first division of the examinations shall include the following subjects:—1. Chemistry and Chemical Physics. 2. Anatomy. 3. Physiology. 4. Materia Medica and Pharmacy. That the second division of the examinations shall include the following subjects:—1. Pathology, including morbid anatomy. 2. Medicine, including medical anatomy, clinical medicine, and therapeutics. 3. Surgery, including surgical anatomy and clinical surgery. 4. Midwifery. 5. Forensic Medicine.

19. That it is desirable that an examination in the earlier subjects of professional study should take place before the end of the first year of professional study.

20. That the professional examinations be conducted both in writing and orally; and that they be practical in all branches in which they admit of being so.

21. That not less than two examiners shall take part in every oral and clinical examination.

22. That the questions to be answered in writing should be submitted to the whole body of examiners for consideration, and revision if desirable, before being proposed to the candidates.

23. That the written answers should be submitted to more than one of the examiners.

24. That excellence in one or more subjects should not be allowed to compensate for failure in others.

25. That the professional examinations be held by the several licensing bodies, except in special cases, at stated periods, to be publicly notified.

26. That returns from the licensing bodies in Schedule (A) be made annually, on January 1, and in a prescribed form, to the General Medical Council, stating the number of the candidates who have passed their first as well as their second and third examinations, and the number of those who have been rejected at the first and second and third examinations respectively; and that the Registrar forward a sufficient number of forms, with a notice for their being returned in due time.

27. That it is not desirable that any University of the United Kingdom should confer any degree in medicine or surgery, whether that of bachelor, doctor, or master, upon candidates who have not graduated in Arts, or passed all the examinations required by the bachelorship in Arts, or passed, after due course of education, examinations, such as are, *bonâ fide*, academically equivalent to those required for a degree in Arts.

28. That in the opinion of the Council it would be desirable, as a general rule, that none of the higher degrees or qualifications in medicine or surgery should be conferred on persons who have not shown evidence of higher professional attainments.

29. That it is desirable that in the examinations on several of the subjects of the curriculum, such, for example, as Chemistry, including chemical physics, physiology, and materia medica, the licensing bodies should limit and define by schedule the extent of examination.

30. That it be recommended that in no case should the examination of a candidate by any of the licensing bodies in any subject be conducted wholly by the lecturer or teacher in that subject in the school in which the candidate has been educated.

31. That it is desirable that observation with the microscope should form part of the examinations of candidates for a licence.

32. That it be recommended that candidates for the final professional examination be required to give evidence that they have had opportunities of practical study with care of patients, as pupil, assistant, clinical clerk, or dresser, in hospital, dispensary, or elsewhere.

33. That it is desirable that, in examinations in Anatomy, candidates should understand that they may be called upon to perform actual dissections, and that candidates in examinations in Surgery should understand that they may be called upon to perform one or more operations on the dead subject.

MR. SCLATER-BOOTH ON THE VACCINATION LAWS.

THE following are some of the observations addressed by Mr. Sclater-Booth to a deputation which waited on him at Whitehall on behalf of the British Medical Association:—

It has been admitted by one speaker that there is no desire to interfere with the system called the arm-to-arm system. That is a vital point from a medical point of view, for a large mass of children are vaccinated by means of the arm-to-arm system. But if I rightly apprehend the objections which have been made to the possibility of vaccination as now conducted communicating diseases other than that which it is intended to counteract, the whole thing rests upon the practice of the arm-to-arm vaccination; and whether the source of lymph be from calf or human being, if the legislation on the subject ordains it to be from arm to arm, there must be supposed to exist a capability of determining whether that be the right system or not, and whether it is most efficacious for the prevention of small pox. That is the point which an eminent doctor holds to be the right thing, and he has expressed himself as satisfied that the system of arm-to-arm vaccination must be maintained if the population is to be properly vaccinated. It is true, as Mr. Hart suggested, that everybody who demands it is to be permitted to have calf-lymph used directly to his own infant. The administrative difficulties of that I will not now go into, for it is on reflection a very serious matter. It is said, again, that there is no confidence in the lymph that comes from the Local Government Board, and yet we are told by another gentleman that the medical profession desires that the Local Government Board should take upon itself the responsibility of procuring and supplying for private vaccination purposes all the public and other vaccinators of the country with lymph. But if there is no confidence in the source from which the present lymph proceeds, how could there be any greater confidence in the source from which the different sorts of calves'-lymph would be served by the Government? I think you will see that the confidence in a public department cannot be exerted in one case and withheld in the other without inconsistency. Many have alluded to the objections entertained to the practice of vaccination by what is called the Anti-Vaccination Society. Now, I have had some experience in this department for years, and I must say that I am not

aware that any of the public who object conscientiously to vaccination would have their objections mitigated in the slightest degree by the substitution of the calf for the ordinary human vaccination. I can imagine there are some whose objection to the arm-to-arm system would be abolished, but apart from that I cannot say for myself that the proposals you have made would mitigate the objections in the slightest degree. The public vaccinations of this country, for which this office is responsible, are in round numbers 500,000; but there are not less than a quarter of a million vaccinations performed every year by private practitioners, and it is impossible therefore to say that there is anything to hinder vaccination being performed direct from the calf if the public demand for it was as great as you have represented it to be. The question, of course, is a most important one, and so influential and experienced a body as yourselves having take this view of it, and having come here to-day deputed to lay the subject before me, adds great weight to the feeling which, unfortunately, has more or less prevailed during the last few years on the subject, and that alone would cause me to assure you, even were I not inclined to do so, that the whole subject shall receive the most careful, constant, and anxious attention here. I would ask you not to take upon yourselves the heavy responsibility of forcing the Government authorities, before they are satisfied that the substitution can be made, by the terms of a preparatory Act of Parliament, which would produce perhaps great confusion, and probably the entire collapse of the system, which you will all admit is extremely difficult to work as it is.

FROM ABROAD.

Professor Zeissl on the Treatment of Gonorrhœa.

It might be thought that all has been said that can be said on the treatment of gonorrhœa, but the experience of so distinguished a specialist as Prof. Zeissl, of Vienna, detailed in a communication to the *Wiener Med. Wochenschrift* (1879, Nos. 38, 39, and 40), cannot fail to prove of interest to our readers.

The object he has in view, he says, is to indicate some of the leading points in ths treatment of catarrhal disease of the male urethra; and he enters into details upon the subject, because both his hospital and private practice have too often given him the sad opportunity of observing that both old and young practitioners are not always careful enough in avoiding manipulations that are highly injurious to the urethra, as, for example, the employment of concentrated solutions for injections.

1. *The Direct Treatment of Acute Gonorrhœa.*—As everyone knows, we can treat gonorrhœa either by direct applications to the urethra, or indirectly through the digestive organs. In the direct treatment, before all things, we must insist upon the patient wearing a suspensory, in order to prevent traction on the testes. He should take no beer or champagne, or any drink which contains much carbonic acid in the nascent state, as this gives rise to dysuria. Meat in the evening and late meals should be avoided, as favouring the occurrence of nocturnal pollutions, aggravating the patient's condition. The same may be said of the sitz-bath taken late in the evening. During the acute stage, if there still exist severe pain, especially after passing urine, and stabbing pains at the posterior part of the urethra—one of the earliest symptoms of gonorrhœa,—we may confidently begin the treatment by the injection of a very weak solution of an astringent metallic salt. After the first effective injections the pains are considerably diminished, the urine is passed more easily, and the slight fever which is often present disappears. The relief of the pain may also be hastened by tepid sitz-baths. It is an interesting fact that the patient who at the beginning of the gonorrhœa can only pass urine amidst the severest pain is able to empty the bladder while in the bath with the greatest ease and comfort. With regard to the injections, they should at first be as weak as possible, so that they may never act as caustics, but only as astringents. The substance from which Prof. Zeissl has derived the best results is the permanganate of potash, of which he prescribes two centigrammes in 200 grammes of distilled water, thrown in four times daily by means of a caoutchouc syringe, care being taken to prevent the entrance of air, the presence of even a small quantity of which in the urethra suffices to induce severe dysuria. If this occur, or pains arise in the testes, the injections must be suspended, and the symptoms suitably treated. As already stated, it often happens that after a few injections the pain diminishes, and all traces of the gonorrhœa frequently disappear after only a week's employment of the permanganate. If, however, after using this very weak solution for a week no essential improvement has taken place, it may be strengthened by a centigramme; but Prof. Zeissl never goes beyond fifteen centigrammes in the 200 grammes of water. A rule to be observed is not to continue the same injection for too long a time, as the urethra becomes accustomed to the presence of the medicinal agent, the further employment of which is then useless. Therefore, if the permanganate does not cause the disappearance or diminution of the purulent discharge after it has been employed for ten or twelve days, a weak solution (thirty centigrammes to 200 grammes) of sulphate of zinc should be substituted, gradually increasing the strength to five decigrammes. If this does not succeed, Prof. Zeissl then resorts to the employment of insoluble bodies, such as bismuth, kaolin, or the acetate of lead, prescribing five parts to 200 either of bismuth or kaolin, or two parts of sulphate of zinc and two parts of acetate of lead to 200 of distilled water. Injections containing these suspended bodies must be well shaken, so as to cause a uniform distribution of the precipitate in the urethra. This powder may remain in the urethra for a long period—and at all events until the next discharge of the urine; and when it is forced into the glandular orifices of the prostate it often remains there for a fortnight or longer. This circumstance explains the beneficial action of these suspended substances, as they remain in close and prolonged contact with the membranous and prostatic portions of the urethra and with the prostate itself—the parts in which the catarrh exhibits the greatest obstinacy. After the injection of these substances, a circumstance is often observed which may cause the patient unnecessary alarm. When the injections have been employed for fourteen days or so, he may perceive, when discharging hard fæcal masses from the rectum, that little granular bodies, adhering to each other by means of filaments, issue from the urethra. They can be broken up by the fingers, and are nothing else than portions of the bismuth or kaolin which had remained in the prostatic canals cemented together by the secretions of the prostate.

If, in spite of the means employed, some remains of the gonorrhœa still exist; if the urethra is found stuck together in the morning; or if, on syringing it out with clean water, this is found, when examined in a glass tube, to contain mucous filaments or epithelium,—it is then proper, besides using the injections, to introduce a gum-elastic bougie. For this purpose, Prof. Zeissl employs a conical elastic bougie of moderate size (from 10 to 14 of Charrière's scale), and having well oiled it and passed its end through a powder composed of starch, kaolin, or bismuth, passes it into the urethra at least as far as the sphincter vesicæ, and allows it to remain there for five or ten minutes. From this procedure he has obtained highly favourable results in gonorrhœa which may have lasted for years. Nor has has he ever met with any ill effect arising from it, or any consecutive disease (as the formation of stone) resulting, numerous autopsies having shown that the powder is not introduced into the bladder, but is all smeared over the urethra. When by the use of all these means a cure is still not effected, we may then resort to solutions of alum, tannin, sulphate of cadmium, or acetate of zinc, and to the introduction of lithotomy sounds until the largest which the urethra admits of has been attained. This last procedure will be again noted when treating on affections of the prostate consequent on gonorrhœa. The following are the formulæ which Prof. Zeissl recommends:—℞. Sulph. cadmii 30 centigrammes, aquæ 200 grammes. ℞. Alum. 5 grammes, aquæ 250 gr. ℞. Sulph. cupri 5 centigr., aquæ 250 gr. ℞. Acet. plumbi basici soluti 5 grammes, aquæ 200 gr. ℞. Acet. zinci 1 gramme, aquæ 250 gr. ℞. Acet. zinci, tannini puri, āā 50 centigr., aquæ 200 gr. ℞. Acet. zinci 70 centigr., tinct. catechu 1 gramme, tinct. opii gtt. x., aquæ 200 gr. ℞. Liq. ferri sesqui. soluti gtt. xx., aquæ 200 gr. Or urethral suppositories may be formed of equal parts of kaolin and glycerine, and used four times daily. When

the subjects of gonorrhœa complain of very severe pains along the perineum, and especially on sitting down, either extract of belladonna suppositories (℞. Ext. bellad. 7 centigr., butyri de cacao q.s., f. x. parva suppositoria) may be introduced into the rectum, or seven centigrammes of acetate of morphia may be added to any of the injections. Or again, urethral suppositories may be formed of seven centigrammes of muriate of morphia divided into ten. Prof. Zeissl attaches great importance to the not having too early recourse to the more powerful action of the above substances, especially the sulphate of copper. His experience has taught him that if at the beginning concentrated and caustic injections are employed, they may give rise to very violent reaction; and in one case he met with, the whole of the mucous membrane of the urethra was discharged like the finger of a glove, accompanied by great hæmorrhage, in consequence of using a concentrated sulphate of copper injection. So, also, violent pain and a great increase of the discharge were induced by an injection containing five grammes of the hypermanganate of potash to 200 of water. These examples, to which many others might be added, suffice to show that concentrated, and therefore caustic, liquids act very mischievously on the urethra. Further, it is a fact that, by the use of these injections, the disposition which gonorrhœa already possesses to induce stricture of the urethra is increased; and, indeed, caustic injections will often suffice alone to give rise to this affection.

2. *Direct Treatment of Chronic Gonorrhœa.*—By the term chronic gonorrhœa, Prof. Zeissl understands a disease of the urethra which is limited to a small portion of the canal, most frequently quite its posterior part. There is only a spare sero-mucous secretion, and rarely slight pain, especially seated at the diseased portions of the urethral mucous membrane. Patients suffering in this manner must be asked whether the stream of the urine has latterly considerably diminished in size, for a similar chronic catarrh of the urethra will very frequently be produced by stricture. A sound (from No. 15 to 18 of Charrière's series) should be passed in order to ascertain whether the calibre of the urethra is narrowed. For those accustomed to the examination of the urethra, an elastic bougie will serve as well; but for those who have not had large practice in catheterism the sound is to be preferred, because with a solid instrument injury to the urethra is less likely to be produced than with an elastic one; while entanglement of this last in a fold of the urethra may lead to a diagnosis of stricture being made where none such exists. Very often the patient is able, on the introduction of an instrument, to indicate exactly the diseased spot, by the pain occasioned there. We must not, however, trust too much to this indication, for the patient is often, on the first introduction of an instrument, in too anxious a state of mind to be able to afford any exact information. Patients constantly complain of a painful sensation when the instrument passes over the caput gallinaginis. During the withdrawal of the instrument, even those who have had but little practice with it can easily detect irregularities in the urethra when they are produced by granular growths, small polypi, etc., and sometimes we are enabled to discover the diseased portion. Several methods have been devised for the direct application of medicinal substances to the small isolated diseased part of the urethra. Bougies or catheters on which such substances have been smeared, and syringes with catheter-like pipes, allowing the astringent fluid to be applied drop by drop at the posterior part of the urethra, are among these. The efforts which have been made to render the membrane of the urethra as visible as that of the vagina, and which have given rise to the invention of the endoscope, have not, in Prof. Zeissl's opinion been very successful. By its aid some interesting pathologico-anatomical facts have been established; but no material improvement in the treatment of prolonged gonorrhœa has attended the use of this instrument. Out of hundreds of cases in which he has employed the endoscope, Prof. Zeissl has only succeeded in effecting a cure in two instances by pencilling the diseased portion of the mucous membrane. He has therefore well-nigh given up this mode of treatment. He recommends that endoscopy should be practised upon the cadaver, and especially with the straight endoscope, which requires great dexterity for its introduction.

The same method of treatment must be continued in the chronic as in the acute form of gonorrhœa, and in the great majority of cases it will prove successful. Especial advantage will be gained by the well-timed introduction of the elastic bougie and sound, which will be referred to again.

(To be continued.)

REVIEWS.

The Irish Medical Directory for the Year 1880. Dublin: Offices of the *Medical Press and Circular*, Molesworth-street. London: Baillière, Tindall, and Cox, King William-street, Strand.

This will be found a very useful book of reference, not only for the medical profession in Ireland, but for all persons desirous of information as to medical matters in that country. Besides the Medical Directory proper, it devotes about one hundred and forty pages to giving, *verbatim* and in abstract, the Acts of Parliament specially affecting the profession in Ireland. It gives full information concerning the Local Government Board; the Dispensaries of Ireland, with the Names, Salaries, and Fees of the Medical Officers, the Expenses of each District, and the Number of Cases Relieved; the General Rules and Regulations for the Government of Dispensary Districts; the Laws, Regulations, and Expenditure of the Poor-Law Service, and the Registration of Births, Deaths, and Marriages Service, with Tables of the Statistics for the year 1878. The New Army Medical Warrant, the Regulations of all the Public Medical Services, and those of the Irish Licensing Bodies, are given in full. And the work contains much other information, statistical, and of various kinds; as, for instance, a List of the Army Medical Officers (ten in number) to whom the Victoria Cross has been awarded "for valour," with the official notification of the deed or deeds of valour for which the cross was in each instance conferred. We observe also a List of Distinguished and Titled Members of the Medical Profession, and Parliamentary Representatives; which, however, is open to criticism. But, altogether, the work may be strongly recommended.

Index Medicus. A Monthly Classified Record of the Current Medical Literature of the World. Compiled under the supervision of Dr. John S. Billings, Surgeon U.S. Army, and Dr. R. Fletcher, M.R.C.S. Eng. New York: F. Leypoldt, Park-row. London: Trübner and Co., Ludgate-hill, E.C.

This work, which we noticed on its first appearance, reached its twelfth number in December last; and it must be acknowledged that it very fairly fulfils the rather startlingly ambitious purpose for which it was established. It is the result of great and continuous labour and research, and supplies a very valuable and useful index to the current medical literature of all the departments of the science and art of medicine.

The Lay of the Bell, and other Ballads. By Schiller. Translated into English Metre by Andrew Wood, M.D., LL.D., F.R.S.E.; Fellow of the Royal College of Surgeons of Edinburgh; Member of the General Medical Council. Edinburgh: W. P. Nimmo and Co. 1879.

Dr. Andrew Wood happily is not only able to find in studies of general literature recreation from his professional labours, but he also has the courage—amply justified—to let the public share sometimes in the pleasure that his gleanings in the wider field of work afford him. Not long ago he published translations of the Satires, and of the Epistles and Art of Poetry of Horace into English metre; and soon afterwards Schiller's tragedy of "Don Carlos." About two years ago we had from him Lessing's "Nathan the Wise," translated into English blank verse; and now he gives us an admirably spirited metrical English rendering of some of Schiller's most popular ballads. His list includes *Das Lied von der Glocke, Ritter Toggenburg, Der Gang nach dem Eisenhammer, Des Mädchensklage, Die Kindesmörderin, Die Kranische des Ibykus,* and *Der Ring des Polycrates.* The first is the longest of the seven, and, we should say, the most successful. The translation is remarkably close and faithful; and the spirit, and the swing and rhythm, as well as the metre of Schiller's lines, are generally well and not seldom very happily preserved. Next in power and force

we should place the passionate and thrilling tale of the "Infanticide"; but all are good, and highly creditable to Dr. Wood's scholarship and literary powers. In an introduction to the work Dr. Wood gives a brief notice of each ballad, explaining and illustrating its meaning and intention, and pointing out what are, in his eyes, its chief beauties and excellences. We will only add that throughout the little volume the German ballad and the English translation face each other on the pages—an arrangement which certainly adds to the value of the work for students of both languages.

Poems. By William Frank Smith, M.B., late Physician to the Sheffield Infirmary. Second Edition, with a Lecture on the History of Medicine, and a Biographical Memoir by Dr. Pye Smith. London: Smith, Elder, and Co., Waterloo-place. 1879. Small 8vo. Pp. 240.

This little book is outside the pale of ordinary criticism, for the author of the poems contained in it was a physician who died in January, 1877, at the age of forty. He was a true and good physician; ardent in study, learned, acute, and full of sympathy with suffering. And he was much more than this. He loved all things beautiful; was quick to observe, and to feel; and had the true poetic afflatus. He wrote poetry because he could not help it, and with practice, such as he could gain time for, his facility of language and versification markedly increased. We do not propose to even mention all the poems the book contains; but all will be read with interest, and not a few with delight. The story of "Saint Bruno the Believer," with its vivid picture of "melancholia," is very powerfully depicted; as are also "The Soliloquy of Spinoza," and the word-picture of "Meister Cornelius the Worker." While some of the smaller poems are charming—gems of poetic feeling and musical versification. The book will receive a tender welcome from those who did not know Dr. Frank Smith, and will justify the loving pride with which those who knew him best must grieve over the early quenching of the fame that they foresaw; though his brow did not altogether miss its earthly wreath.

Nerve-Stretching of the Supra-orbital in Neuralgia.—Dr. Masing relates (*Petersb. Med. Woch.*, December 20) the case of a woman, sixty years of age, who suffered for some years from fearful facial neuralgia, almost every branch of the fifth pair being implicated. No remedy had afforded other than temporary alleviation, and when she came under the reporter's care he determined to try the effect of stretching the supra-orbital nerve as being the only one of those implicated that was accessible. This was done January 30, 1879, the nerve hanging in a loop outside the orbit, and from that time all the most terrible symptoms ceased, and the patient progressively improved, so that by October 6 she was pronounced completely well, having undergone a relapse, brought on by cold, in April, which a few eight-grain doses of quinine mastered.

Composition and Quality of the Metropolitan Waters in January.—The following are the returns (by Dr. Meymott Tidy) of the Society of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, etc.	Nitrogen: As Nitrates, etc.	Ammonia.		Hardness. (Clarke's Scale)	
				Saline.	Organic.	Before Boiling.	After Boiling.
Thames Water Companies.	Grs.	Grs.	Grs.	Grs.	Grs.	Degs.	Degs.
Grand Junction ...	21·45	0·048	0·158	0·001	0·008	15·8	3·6
West Middlesex...	22·20	0·081	0·158	0·015	0·008	16·2	3·8
Southwark and Vauxhall ...	22·45	0·066	0·165	0·000	0·009	16·0	3·6
Chelsea	21·40	0·022	0·150	0·005	0·008	15·8	3·6
Lambeth	21·20	0·043	0·167	0·001	0·010	15·6	5·3
Other Companies.							
Kent	33·10	0·007	0·435	0·000	0·002	21·2	6·0
New River ...	22·85	0·024	0·185	0·000	0·008	16·0	3·2
East London ...	24·10	0·026	0·183	0·015	0·009	16·5	3·8

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours. The water was found to be clear and nearly colourless in all cases but the following, when it was very slightly turbid—namely, in that of the Lambeth and the West Middlesex Companies.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

Friday, January 23.

E. H. Greenhow, M.D., President, in the Chair.

(*Concluded from page* 163.)

A Case of Chylous Urine after Ague in India—Albuminuria—Cessation of Chylous Urine, with the Development of Glycosuria and Polyuria.

Dr. S. O. Habershon also read this paper. Eliza M. C., aged fifty-nine, was in India from the age of two years till she was forty; then, after a stay of two years in England, returned to India for ten years more. She had had twelve children, being married when she was about fifteen years of age, and at sixteen years of age she had her first attack of ague, and afterwards had repeated attacks before she left India. For three years she had noticed her urine to be white, like milk, and very thick. This condition continued till admission into Guy's Hospital on July 12, 1876; her ankles and legs became swollen during the day. For three months her sight had failed, and objects appeared misty. The patient appeared healthy; there was no evidence of disease of the lungs or heart, nor in the abdomen could anything abnormal be detected, except that the liver could be felt two inches below the ribs. The tongue was red and dry; the appetite good; there was great thirst. The urine had specific gravity of 1025; it was milky in appearance, and it contained both albumen and sugar; opium and quinine were given. On July 18 it was found that the urine which was passed before breakfast was lighter in colour, but that passed afterwards was opaque and milky; the quantity was nearly five pints. She was placed on the restricted diet for diabetic patients, and gluten-bread given. The urine remained milky, but the sugar lessened, and on July 28 and 31 was absent. On August 2 the urine was still milky, and was described as in "lumps like jelly." On August 7 the quantity of urine passed was four pints twelve ounces, but it was free from sugar. Various specimens of urine and of her blood were examined for filariæ, but none were found; when allowed ordinary diet the sugar returned. On August 23 the urine passed before breakfast was quite clear and free from sugar, but it contained a small quantity of albumen; but that during the rest of the day was milky and became gelatinous on standing. On September 20 there was no sugar in the urine, its specific gravity 1020, but the sugar returned after the allowance of ordinary bread. On October 10 Mr. Higgens found opacity of the lenses, and on the 17th performed iridectomy on the left eye. November 11, the urine passed after breakfast became clear; 15th, it was clear, of specific gravity 1012, free from albumen, but it contained sugar; about four pints and a half of urine were passed during the day. When the ordinary bread was allowed the sugar increased; and on November 23 the specific gravity was only 1010, but the urine still contained sugar. On December 2 she passed nine pints of urine in the twenty-four hours, clear and pale, specific gravity 1010, free from albumen, but containing sugar. On the 19th eight pints and a half of urine, specific gravity 1014, contained 242 grains of sugar. On January 6 ten pints of urine were passed, of specific gravity 1008, and a small quantity of sugar was present. The tincture of iron was prescribed, and afterwards ammonia with laudanum. During the whole of January the urine was about the same, clear, eight to ten pints in quantity, specific gravity 1010 to 1012, and it contained sugar; and on January 27 there were 1800 grains of sugar found. On February 5 she passed nine pints, specific gravity 1010, and after fermentation the specific gravity was 1006, and about 730 grains of sugar. She remained in the hospital till February 21; her general health had improved; the chylous urine had ceased, the albumen had also disappeared, but the urine continued of low specific gravity, and it contained sugar. On February 17 it was nine pints, of specific gravity 1014. This case was one of chylous or of lymphous urine, for there was spontaneous coagulation, but it was associated with glycosuria. Albumen soon disappeared, but the sugar remained. At first the sugar ceased when the diet was restricted, but it

afterwards became more decided and permanent. Search was made many times for filariæ, but none could be detected in the blood after careful microscopical examinations. In recorded cases of chylous urine, the condition has been referred to change in some of the lymphatic vessels connected with the kidney, but its association in this instance with glycosuria suggested the idea that both conditions—the presence of chyle and of sugar in the urine—might be referred to change in the liver. Of the hepatic disease there was no positive proof, and the connexion with the liver must be regarded as conjectural, at any rate as regards the chylous state.

Dr. Pavy said that this same patient was subsequently under his care. During the time, however, no chyluria was observed, and he considered it a case of mild saccharine diabetes. The peculiarity of it arose from the association of diabetes mellitus with diabetes insipidus. He had once a similar case, that of a boy, under treatment, and in him he found that on non-restricted diet the large quantity of sugar excreted ceased to be passed with the urine when the diet was checked. He was convinced that the two conditions were a result of vaso-motor paralysis affecting the chylopoiëtic viscera, and interfering with the due transformations to which the blood within their vessels is submitted. He related a case under his observation in 1875, of a lady, concerning whom he was consulted by a country practitioner. She showed chylurous symptoms, but becoming pregnant, she lost them when advanced into the third month of gestation. After delivery, however, the chyluria returned. He concluded that this was due to some abnormal connexion set up between the lacteals of the chylopoiëtic viscera on the one hand, and those of the renal on the other. The great inequality of the blood-pressure on the two systems precluded the possibility of any natural connexion.

Cupric Test-Pellets for Sugar.

Dr. Pavy said that he desired to introduce to the notice of the Clinical Society a new form of test for sugar, which he thought would prove of no inconsiderable service to the medical practitioner. Of the various reagents that have been recommended for the detection of sugar, his experience led him to consider the cupric test by far the most reliable, and this view stood in accord with that which was generally entertained by analytical chemists. It had been hitherto the practice—certainly where delicacy and precision were in question—to employ the test in the form of a solution prepared by mixing an alkaline tartrate with sulphate of copper and either potash or soda. Such a solution contains the oxide of copper in a state ready to be reduced to the condition of the suboxide when in contact at a boiling temperature with glucose. When freshly prepared, this solution fulfils all that can be desired, but there is the disadvantage belonging to it that, after being kept for some time, especially if exposed to light and air, it is liable, without the presence of sugar, to throw down a certain amount of reduced oxide on boiling, and thus possibly to mislead, unless precautions are taken to provide against it. Besides this objection, the liquid, unless frequently used, is very apt to cause the stopper of the bottle in which it is kept to become fixed. In fact, it must be spoken of as an inconvenient liquid to keep for only occasional use. He had long felt that it would be very desirable if the ingredients of the test could be incorporated and kept in a solid form; and some years ago he had made a fruitless attempt to attain this object. Latterly he had given his attention afresh to the subject, and the test-pellets before the Society were the result of the task undertaken. He need not enter into details regarding the ideas which failed on application to yield a satisfactory result. It would suffice for him to say that the test-pellets contained the solid ingredients of the cupric test solution in a dry state, and that they were brought into the condition of a coherent mass by compression. The preparation had been placed in the hands of Mr. Cooper, of 26, Oxford-street, who, it was but justice to say, most successfully met the difficulties that were unexpectedly encountered. An article had been produced which met with Dr. Pavy's entire satisfaction, and which he felt was adapted hereafter to render good service in relation to diabetes. There appeared no reason why the pellets should not keep for an indefinite time without undergoing change if preserved in a closed bottle away from moisture. In using them all that was necessary was to place one in a test-tube with about three cubic centimetres, or rather under a drachm, of water, and to apply heat until complete solution had occurred, with the accomplishment of which a clear deep blue liquid would be formed, which actually constituted the cupric test solution. At present it was only as a qualitative test that the pellets were introduced, but there was no reason that hereafter the preparation should not be conducted with sufficient attention to accuracy of weighing to render them applicable for quantitative analysis. Dr. Pavy further mentioned that the test-pellets exhibited were ready to be sold by Mr. Cooper, chemist, of Oxford-street, in bottles containing twenty-four, at a cost of 1s.

Through an error the following observations on Dr. Habershon's case of pyelitis were omitted in our last:—

Mr. Golding-Bird endorsed the opinion that the man's safety in this case was consequent on the action taken. The necessity for surgical interference was illustrated by a case he had seen for Mr. Durham, being that of a man with a swelling in the loin, but having also a bladder-affection. It was a matter of uncertainty at first which indication to treat primarily. He decided, however, to cut down on the kidney, and, when he explored it, he found no stone, but some small concretions. The case did well, and he felt that, the danger being small, and an incision on to the kidneys involving no serious evil, in confirmation of diagnosis simply, it ought to be incurred.

Mr. Walsham drew attention to another means of diagnosing in these cases, viz., by introducing the whole hand into the rectum, and exploring the ureter and pelvis of the kidney through the intestinal wall. This method, he said, was productive of no inconvenience to the patient, nor did it involve tearing the sphincter or the occurrence of any injury.

Dr. Habershon had had no experience of this mode of diagnosis. The late Mr. Maunder had told him the sphincter was often torn in attempting to introduce the hand into the rectum. In the case he had read, however, no necessity for trying this method existed, since there was no doubt felt as to its nature. He thought it might be useful when, at an early stage of disease, difficulty of diagnosis was experienced.

PATHOLOGICAL SOCIETY.

Tuesday, February 3.

Jonathan Hutchinson, F.R.C.S., President, in the Chair.

Articular and Osseous Lesions in Locomotor Ataxy.

Dr. Buzzard opened the discussion on this subject in an interesting communication, of which our readers will find a full abstract in another column.

Dr. Gowers showed an elbow-joint from a patient, aged forty-five, the subject of locomotor ataxy, who, four years after the disease commenced, and when the symptoms were well marked in both arms and legs, fell, striking the elbow. He used the arm next day without inconvenience, but the joint rapidly swelled, and a doctor whom he consulted thought some bone had been broken. Two months later, when seen, the joint was enormously swollen, fourteen inches in circumference, abnormally mobile, and loose bone could be felt. There was not, nor had there been, any pain. The swelling slowly lessened. Six months later he died from a painless but extreme pleural effusion. The cord presented the usual lesion. In the elbow-joint the external condyle of the humerus had been split off, and the coronoid process of the ulna was also fractured. The ends of the bones had lost most of the cartilage and were eroded. The synovial membrane was covered, between the bones, by villous projections, some fine, others large. There were also two pieces of bone which could not be accounted for by fracture; one, about half an inch square, was above the coronoid process and projected into the cavity of the joint; the other was a plate of bone in the outer wall of the synovial sac, about an inch square, but apparently in two pieces. The case was of interest as illustrating the course of a joint-lesion in ataxy, and on account of the painless character of the swelling and continued use of the arm in spite of the degree of damage. The painless character of the fatal pleural effusion was also worthy of remark.

The PRESIDENT exhibited, in the first place, several casts sent by Professor Charcot, of Paris, illustrative of the joint-lesions in locomotor ataxy. One represented atrophic bone-changes at the elbow-joint, similar to those seen in Dr. Gowers' case. One exhibited great wasting of the upper part of the femur, with perhaps ununited fracture of its neck; and another showed great shortening of the femur after fracture. In another cast, taken from a living patient, seen by the speaker himself in Paris, the head of the humerus was represented as displaced under the clavicle, and projecting markedly under the skin. The head of the bone in that case was apparently unaltered in shape, and it was quite freely movable, the movements being quite painless. In the same patient the other humerus was dislocated on to the dorsum of the scapula, and one knee was dislocated, the tibia and fibula being displaced outwards and behind the femur, the outer condyle of which had disappeared. At all these affected joints the bones could be moved about with the greatest ease, and without any attendant pain. The long bones of the leg also presented much general distortion. Some of these casts were from cases which Charcot had already published. The speaker then referred to a case that had occurred in his own practice. A gentleman, of middle age, had suffered so much from the frequent occurrence of severe gastric pain and vomiting, without any apparent cause, that during one whole year he was utterly unfit for business. These *crises gastriques* (which the attacks must have been) passed off, and were succeeded by pain and loss of power in the right hip. For these latter symptoms he consulted the speaker, who diagnosed the condition to be rheumatic arthritis. Three years afterwards the patient came again suffering from commencing amaurosis, beginning with want of perception of colour; and blindness, with white atrophy of the optic nerve, rapidly ensued. The speaker now suspected the nature of the case, and on inquiry learned that there had been characteristic pains in the legs. The hip at the present time presented a condition either of dorsal dislocation of the femur, with absorption of the head and neck of the bone, or of badly united fracture of the neck; yet the man walked about quite comfortably, the former pain and weakness having entirely disappeared, and there being simply a slight shortening of the affected limb. Mr. Hutchinson next exhibited the hip-joint of a man whom he had had under observation for fifteen years. He had first of all amaurosis, which did not, however, become complete, and latterly there were other distinct symptoms of locomotor ataxy. Post-mortem, the limb was found to be much shortened, with an ununited fracture of the neck of the femur. The bony mass of the great trochanter was hollowed out into a cup-shaped cavity to receive the head of the bone, which was anchylosed to the acetabulum. This fracture must have been almost of a spontaneous nature, for no one knew how or when it could have occurred. This patient had constitutional syphilis, and that most probably was the cause of the ataxy in this particular case.

Mr. A. DORAN remarked that Professor Charcot had presented to the Hunterian Museum an actual specimen of a diseased joint from a case of locomotor ataxy. The Museum also had presented to it by the late Dr. Allan, of Mauritius, a number of specimens illustrating leprosy, some of the humeri among which showed great thinning of the shaft, and a few were thus spontaneously quite divided across. Spontaneous amputation of the limbs was well known to occur in leprosy.

Mr. MACNAMARA thought these joint-changes might be explained much more satisfactorily otherwise than by ascribing them to a central nervous lesion, as Dr. Buzzard had suggested. A common initial feature of all the cases was synovitis, with no great pain, but with very great distension of the joint. This must interfere with the nutrition of the joint; the articular cartilage must be destroyed very early; and the subjacent lamina of bone, being dependent on the cartilage for its nutrition, would therefore soon suffer too: thus the cancellous bone would be exposed and would undergo atrophy, and some of the medulla could protrude and produce the bony outgrowths found in many cases. In fact, the articular changes were very like those in chronic rheumatic arthritis; but there were in addition, as the result of the ataxy, the wasting of the muscles and the consequent looseness of the joints. A gentleman who had consulted him in India ten years ago for what he diagnosed to be rheumatism, called on him again, eighteen months ago, suffering from increasing blindness with optic atrophy and from well-marked locomotor ataxy. The head of the right humerus was now entirely gone, and the shaft of the bone projected prominently upwards under the skin. No other joint was affected. In this instance a synovitis of long standing had preceded the subsequent articular changes. He could not but think that this species of arthropathy was better explained by a pre-existing synovitis than by the implication of an assumed nervous centre.

Dr. ALLEN STURGE had at present under his care a man suffering from marked locomotor ataxy. His first symptoms were severe gastric pains. He next had swelling in the knee-joints, and later on other distinct symptoms were developed. But this joint-swelling disappeared by-and-by, leaving only very slight signs of joint-disease. The speaker had also seen two ataxic patients in whom spontaneous fracture occurred. In the one case the right tibia was fractured in the act of drawing on a boot, and that patient's right femur also broke subsequently. The second case was that of a woman and one of Charcot's patients. Her tibia and fibula both broke while she was walking in the ward, and a few days afterwards she fractured her thigh when pulling herself up in bed. Mr. Macnamara's explanation, even if admitted, would only remove the question one step further back. Why should there be synovitis at all? And why should the bones be so very much affected when the joint-lesion is slight? One of Charcot's specimens, which he had seen, showed the osseous tissue as thin as parchment.

Mr. HULKE recalled the fact that the late Mr. De Morgan exhibited before the Society, several years ago, the hip, knee, shoulder, and elbow joints from a case in which there had at first been great distension of the joints followed by relaxation of the ligaments, so that the limbs could be freely moved about in flail-like fashion. There was complete absence of pain. Many of the natural bony eminences were removed, and new masses of bone were deposited round the joints, and even among the muscles of the hip. The neck of one femur was fractured, and large osteophytic spines projected down from it. The speaker was not quite certain, but rather thought the man was not considered to be suffering from tabes dorsalis.

Mr. M. BAKER asked how a case of this kind of arthropathy could be distinguished from osteo-arthritis. Was it not possible that it was only a matter of coincidence that these joint-lesions had been found in cases of locomotor ataxy? As that disease and osteo-arthritis were two common affections, they would be occasionally found in the same person, though unconnected. However this might be, the occurrence of arthropathy in ataxia may help to the conclusion that osteo-arthritis is a neurosis.

Dr. CURNOW referred to the case of a man at present under his care at the Seamen's Hospital, suffering from well-marked ataxy. During the last five or six months many fatty tumours, varying in size from a pigeon's egg to a bean, had developed in the subcutaneous tissue. Though this, might be a case of coincidence, the widespread and symmetrical development of the tumours was interesting in connexion with the theory that trophic changes of a central nervous origin were the factors in the arthropathy of ataxy.

Mr. BUTLIN suggested that, though there was a synovitic effusion at first, there might be not merely synovitis, but rather a general arthritis, just like chronic rheumatic arthritis. But later on there seemed to supervene a marked atrophy in the ataxic arthropathy—a result quite different from that found in the chronic rheumatic arthritis. He had seen one case in which the ends of the bones of the leg were enlarged, and all the conditions of ordinary rheumatic arthritis seemed present, yet the limbs could be freely moved in flail-like fashion.

Dr. BROADBENT had seen the younger of Dr. Buzzard's female cases at an early stage of the ataxy. She had at first some pain in the back, which she attributed to a fall. The characteristic pains in the extremities were never well marked while she was under his care, and her pupils were then dilated, not contracted, and, though not fixed, not sufficiently mobile. There were then frequent attacks of peculiar gastric crises; they were chiefly marked by pain, not by vomiting, and occurred mostly during the night. During the paroxysms she would get out of bed, beat her abdomen, and rush about the ward, all her ataxic symptoms having, for the time being, apparently disappeared. When the arthro-

pathy first began there was no proper general synovitic distension, but there appeared a swelling, like that of a large bursa, *behind* the joint, and the structures soon became relaxed, and the tibia and fibula began to project backwards. The speaker had seen but few cases of arthropathy in ataxic patients, and he could scarcely agree with Dr. Buzzard in associating the occurrence of arthropathy with a previous history of gastric crises, for he could recollect six cases in which the latter were well marked, and the only one of these that had also developed arthropathy was the case that had come under Dr. Buzzard's observation.

The PRESIDENT, in calling upon Dr. Buzzard to reply, said he hoped the discussion of this subject would be renewed on another occasion. The Society would be glad to see either living specimens, recent preparations of the joints and bones, or museum preparations, of which, he imagined, there must be many whose nature had not been detected.

Dr. BUZZARD, in reply, thanked the President and others who had brought forward specimens and records. Two additional cases had been reported to-night—one by the President, the other by Dr. Sturge—in which was found the association of arthropathy with gastric crises. He had not heard of a case like Dr. Curnow's. Surgeons here, as in Paris, were inclined to doubt whether there was anything remarkable differentiating these joint-lesions from chronic rheumatic arthritis. While the resemblance anatomically was certainly very close, there were some very important differences. Thus chronic osteo-arthritis is most frequently confined to one joint, and that much more frequently one of the smaller joints; while in ataxic arthropathy several of the joints, and those of the larger size, are usually implicated. In the first period, too, the quantity of fluid effused is generally enormous, and the whole limb is swollen as well, from effusion under the muscles. And in many of the cases there is a remarkable retrogression. Such a thing never occurs in chronic osteo-arthritis; the latter, too, never results in dislocation. The extreme suddenness of the onset, often without the slightest external injury to the joints, and the rapidity of the destructive changes, were also very distinctive features of the ataxic arthropathy. Thus in one of Charcot's cases the head of the humerus entirely disappeared in three months. This course was very different from the slow chronic course of osteo-arthritis. He thought that the vice of nutrition, whatever its nature, must affect both the bone and the cartilage. Mr. Baker's suggestion as to the possibility of a mere coincidence, the speaker thought, might be at once put aside, for the association of arthropathy with ataxy had been too often observed to be susceptible of such an explanation.

(To be continued.)

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, JANUARY 14.

W. S. PLAYFAIR, M.D., F.R.C.P., President, in the Chair.

RUPTURE OF FALLOPIAN TUBE.

DR. GODSON showed for Mr. J. Kingston Barton the uterus and its appendages, of a woman, aged thirty, who had died from internal hæmorrhage. She had been married two months. Menstruation had been regular; the period commenced four days before her death, at its proper time. During this day, whilst walking, she suffered acute pain in the left iliac region, nearly fainting. This passed off, but recurred again four days after while menstruating. Collapse and the general signs of internal hæmorrhage became manifest, and she died within twelve hours. The autopsy showed the abdominal cavity to be full of fluid blood, with large clots in the pelvic portion. The left Fallopian tube was found distended in one part to the size of a small walnut, on the anterior aspect of which was a small irregular rent, which led into a cavity in the centre of what appeared to be organised blood-clots. No ovum could be discovered, and the uterus contained no decidual membrane. The right ovary showed a well-marked corpus luteum. Mr. Barton had sent the specimen as one of tubal gestation and rupture, but Dr. Godson could trace no signs or symptoms of pregnancy. At the same time, he failed to account in any other way for the distension of the tube, both ends of which were patent. Had not death occurred, the blood would have become encysted and have formed a large hæmatocele.

Dr. EDIS thought that though the evidence of extra-uterine gestation was slight, it was not positively proved that it had not existed. The Fallopian tube was not only distended, but also thickened and developed. There was also a marked corpus luteum usually met with in pregnancy.

The PRESIDENT thought it looked like a tubal pregnancy, and suggested that a committee, consisting of Drs. Galabin, John Williams, and Godson, should examine and report upon the specimen.

MONSTER.

Dr. HILLIARD showed a one-headed twin monster, the bodies of which were connected to below the single umbilicus, where they became distinct and perfect. A single head was placed on four shoulders, the only peculiar feature of which was a third ear between two occipital bones.

SUPERFŒTATION.

The PRESIDENT showed for Mr. Clabburn, of Turnhamgreen, a specimen of supposed superfœtation. Dr. Playfair suggested that it might be a twin fœtus mummified.

REPORT ON UTERUS REMOVED BY DR. HEYWOOD SMITH, SHOWN AT LAST MEETING.

A careful examination by Drs. Galabin and John Williams led them to consider the growth as a cylindrical epithelioma, which shows some tendency to pass into a true medullary carcinoma.

ON THE PAIN IN PELVIC CANCER, AND ITS RELIEF BY MORPHIA.

Dr. CHAMPNEYS read a paper on this subject, the former and larger part of which consisted of a clinical study of fifty cases in the wards of St. Bartholomew's Hospital, and was illustrated by fourteen tables dealing with the ages of the patients, the first symptom noticed, the seat of pain, its locality, the date of its commencement, its quality, amount of intensity, time of intensity, and the relation of pain to hæmorrhage. The analysis showed some points of departure from what have been considered established facts; for instance, as many of the patients were from thirty to forty years old as from forty to fifty; and again, pain rather than hæmorrhage was the first symptom noticed. On these the author remarks that his cases were only fifty, and can therefore not overthrow Dr. West's larger number of 166, but suggests that as this part of the question cannot be founded on objective facts, but must depend on the patient's memory, which memory might be supposed to retain hæmorrhage rather than pain, it may be supposed that pain, as a first symptom, may occur oftener than is usually imagined. It was shown that cancer may be painless at almost every stage, but it was remarked that of the author's cases none were painless in which hæmorrhage was absent. The seat of pain was carefully ascertained by making the patient lay her hand or finger on the spot. The localities were most various, the region of prevalent uterine pains being seen, however, to be mainly bounded by the line of the sacrum above and the knee below. It is remarkable that the pains were six times as common on the left as on the right side, which cannot depend on the locality of the disease, but must depend on the difference with regard to sensation between the two halves of the body, a difference seen also in the common left-sided pain of females, and the preponderance of left-sided hemianæsthesia. "Man is not an absolutely bilaterally-symmetrical animal." Aching of the whole front of the thighs, and pain transfixing the body, are believed by the author to be at least uncommon, except in cancer. "Back-ache" amounted to 24 per cent.; pain in the lower abdomen to 14 per cent.; pain in the groins to 18 per cent. of all pains. It was shown that no relation existed between intensity of pain and duration of disease. Thirty cases showed the pain to be worse "post-meridiem," none "ante-meridiem." The author suggests a connexion between pain worse at night and pain relieved by bleeding, as possibly depending on the increase or diminution of vascular tension in the diseased tissues, which is illustrated by the nocturnal tightness of bandages, and he reminds us that in all his painless cases there was bleeding. Three remarkable cases are given at length, of nervous affection, in one of which there was paroxysmal nocturnal motor and vasomotor disturbance of one, then of both legs, depending probably on irritation reflected at the spinal cord. Of the

methods of administering morphia, the hypodermic injection was shown to be far the most, and the suppository the least effectual.

Dr. Matthews Duncan regarded the paper as a very valuable one, but demanding perusal at home and study rather than criticism.

Dr. Graily Hewitt remarked that in regard to the pain in cases of cancer of the uterus or parts adjacent, there was one feature of great diagnostic value, viz., its spontaneity; whereas that due to various other uterine disorders was caused or increased by position or motion. Another point of diagnostic value in regard to cancer was the rapidity of the pulse, which would be rarely found under 90 beats per minute. To relieve pain he preferred the injection of laudanum into the bowels.

The President was surprised to hear pain spoken of as the most frequent first symptom; he had seen so many cases in which the disease was far advanced before it occurred. He inquired whether local treatment had been attempted to lessen pain, and if iodoform had been used for this purpose, with what results?

Dr. Godson, while recognising the amount of time and labour, and the care spent in compiling the tables, considered fifty cases far too few to draw any very definite conclusions from. Out of the author's fifty cases, no less than twenty were below thirty or above fifty years of age; this made the percentage of cases between thirty and fifty years of age far too low. He (Dr. Godson) had made an analysis of 150 cases of uterine cancer which he had attended, and forty-four were between thirty and forty, and sixty-six between forty and fifty years of age, which accorded with Dr. West's statistics. With respect to the locality of the pain at the commencement, it was generally very difficult to get reliable information, at all events when the disease was far advanced: that which existed at the present time was so apt to influence the mind of the sufferer. The same applied to the first symptom, but Dr. Godson was of opinion that this was more generally hæmorrhage; pain was often a very late symptom, only occurring when the disease spread to the structures surrounding the womb. In one of Dr. Champneys' cases the disease commenced with bleeding after parturition. This was not by any means an uncommon case. In Dr. Godson's first series of fifty, no less than four dated the commencement of their illness to their confinements, never free from hæmorrhage since; and yet previous to delivery not a sign existed, if pain, hæmorrhage, and watery discharge be accepted as characteristic symptoms. The uterus while undergoing involution appeared to be a very fertile soil for the germination and rapid growth of cancer. Dr. Champneys had shown that the hypodermic injection of morphia was the most effectual method of relieving the pain. This was not peculiar to cancer; it applied to pain of every description, from all causes; but the method of application was so inconvenient that it could not be generally adopted, and was very unlikely to supersede the administration of morphia by the mouth.

Notes on a Jamaica Galactagogue.

Dr. Izett W. Anderson (of Jamaica) contributed a paper on this subject. He commenced by narrating a case in which the patient had been under his care for pelvic abscess, the child being brought up by hand. Her breasts were flaccid and entirely destitute of milk. Subsequently he found her nursing the child, her breasts being abundantly supplied. She told him she had brought down the milk by drinking cotton-leaf tea. This drew his attention to the drug as a galactagogue, and a lengthened experience in its use had proved its undoubted efficacy. The tea is made by infusion from the green leaves of one of the shrubs that produces the cotton of commerce, the *Gossypium Barbadense*, is prepared like ordinary tea, and is not unpleasant to the taste if mixed with milk and sugar. The author concluded by recommending for trial a concentrated preparation of it, "Liquor Gossypii Corticis," imported by Messrs. Corbyn, Stacey, and Co.

The President thought that the suggestion might be very useful, and hoped that other fellows of the Society, resident abroad, would follow Dr. Anderson's example, and send us notice of any local drugs of value unknown to us.

Dr. Godson said that he had been promised by the author some of the fresh leaves, and he hoped to be able to try their effect, and lay the results before the Society.

Foreign Body in the Vagina—Removal after four years.

Drs. Charles H. Carter and Daly contributed the notes of the case of a girl aged seventeen, who since thirteen years of age had suffered from a fœtid watery discharge, often sanious. On inquiry it was elicited that she had passed a reel into her vagina to stop the flow of blood when the catamenia first appeared. This was found by Dr. Carter firmly embedded and surrounded by cicatricial tissue, and was removed, free incisions being made into the contracted part. Two years subsequently an operation was performed, as marriage was contemplated, and the vagina was found narrowed by cicatrices. Shortly afterwards she became pregnant, and labour was induced by Dr. Daly at the eighth month, the vagina being still strictured. The cicatricial tissue had to be incised, and the forceps was applied, the child being born alive, but dying shortly afterwards. The second labour was allowed to proceed to full term, the cicatricial bands were incised, and delivery occurred naturally, resulting in the birth of a child, still living.

Large Foreign Body in the Vagina for Two Years, perforating Posterior Wall of Bladder.

Dr. Charles H. Carter related this case. The patient, aged twenty, had two years previously passed the metal cup of a drinking-flask into the vagina. At first it caused her great pain and some bleeding, but this soon ceased, and she became regular. Six months afterwards the urine began to dribble away. The author removed the foreign body, which, with the phosphatic deposit encrusting it, weighed nearly six ounces; part of it was in the bladder, and the fistulous opening was two inches broad. A month afterwards the fistula, much reduced in size, was closed by operation, and a complete cure resulted.

Dr. Edis mentioned the case of a large oval pessary, the size of a goose's egg, which he had removed from a woman, who had worn it for eleven years, ignorant of its presence. She had many symptoms of cancer. It showed the importance of giving full directions to patients in respect to pessaries inserted.

National Orthopædic Hospital, Great Portland-street, W.—The operation day at the above Hospital is altered from Tuesday to Wednesday, at 10 a.m.

The late Dr. Benson.—At a meeting of the Committee of Council of the Irish Medical Association, held at the Royal College of Surgeons in Ireland, Stephen's-green, on January 27, Dr. Speedy, chairman of Council, in the chair, the following resolution, proposed by Dr. J. W. Moore and seconded by Dr. Jacob, was unanimously adopted:—"That the Council of the Irish Medical Association have heard with deep regret of the death of Dr. Charles Benson, who for many years was the earnest friend and zealous supporter of this Association as member, Councillor, and President. The Council desire to record their sense of the loss sustained by the Association in the removal of so valued a colleague, and, at the same time, to express their sympathy with Dr. Benson's family in their present bereavement."

Treatment of Diphtheria.—In a communication to the Petersburg Medical Society (*Petersburg. Med. Woch.*, January 17) Dr. Lehwess stated that he had treated several cases of diphtheria successfully by the hypodermic injection of the muriate of pilocarpin, and especially instanced one in which diphtheria of the fauces had existed in a high degree for six days, accompanied by a temperature of 40° and 41° C., infiltration of the maxillary glands, and nephritis. He injected a syringeful of a 2 per cent. solution, which produced abundant sweating and salivation, with reduction of temperature and general improvement. Dr. Masing observed that this treatment will prove of great advantage if further trial show it so efficacious in advanced diphtheria. He has himself found Dr. Schummers' iodine treatment very useful, but it is so only when employed during the first four days, and when no caustic applications have already been made. He moistens a medium-sized camel's hair pencil with a few drops of tincture of iodine, and by a turning motion of the hand rubs off the diphtheritic deposit, leaving a clean and often a bleeding surface. Iced-water compresses are applied to the submaxillary region, exchanging them in a few hours for warm compresses. Diluted lime-water gargles should be constantly used.

MEDICAL NEWS.

UNIVERSITY OF DUBLIN.—TRINITY COLLEGE.—At the Hilary Term Examination for the degree of Bachelor of Medicine, held on Monday and Tuesday, January 26 and 27, the candidates passed in the following order of merit:—

Mouillot, Francis A.B.
Silcock, Alexander.
Lingard, Thomas Robert.
Moore, Edward E.
Patton, William J.
Lucas, Thomas J. R.
Dixon, Charles H.
Studdert, Richard C.
Mason, Alfred.
Smith, David C.
Kane, John S.

At the same examination the Licentiateship in Medicine was obtained by—

Brazier-Creagh, George W.

and the degree of Bachelor of Medicine was obtained by—

Hickson, Richard C. C., Army Medical Department.

At the Examination for the degree of Bachelor in Surgery, held on Monday and Tuesday, February 2 and 3, the candidates passed in the following order of merit:—

Darling, John Singleton.
Silcock, Alexander.
Moore, Malcolm H.
Smith, David C.
Cohen, Abraham.

At the Spring Commencements, held, according to custom, on Shrove Tuesday, February 10, in the Examination Hall of Trinity College, the following degrees in Medicine and Surgery were conferred by the University *Caput*:—

Baccalaurei in Chirurgiâ.

Cohen, Abraham.
Darling, Johanes Singleton.
Moore, Malcolm Henricus.
Silcock, Alexander.
Smith, David Chadwick.

Baccalaurei in Medicinâ.

Dixon, Carolus Hampden.
Hickson, Ricardus Carolus Coleman.
Kane, Johannes Seymour.
Lucas, Thomas Johannes Rashleigh.
Mason, Alfredus.
Moore, Edvardus Erskine.
Mouillot, Franciscus Albertus De Thierry.
Patton, Gulielmus Johnstone.
Silcock, Alexander.
Smith, David Chadwick.
Studdert, Ricardus Carolus.

Doctores in Medicinâ.

Dudley, Henricus Nathaniel.
Hickson, Ricardus Carolus Coleman.
Poole, Jonas Sealy.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH.—DOUBLE QUALIFICATION.—The following gentlemen passed their First Professional Examination during the February sittings of the examiners:—

John Benson Cooke, Dorking, Surrey; Alexander Cook, Greenock; Herbert Gleeson Stacey, Halifax; Walter Humphries, Tipperary; John Moore Tweed, Antrim; Hugh Hopper, Gateshead-on-Tyne; Richard Clegg, Burnley; Robert Love, Belfast; Hugh Owen Hughes, Denbigh; Robert Roberts, Chester: George Pearce Baldwin, Wolverhampton; Patrick Macdonogh, London; John Mackenzie, Sutherlandshire; James Daniel Ross, co. Cork; Charles Edward Watson, Hertfordshire.

And the following gentlemen passed their Final Examination, and were admitted L.R.C.P. Edinburgh and L.R.C.S. Edinburgh:—

John Benson Cooke, Dorking, Surrey; Henry Richard Leech. Bloxwich; Samuel Alexander, co. Tyrone; George Joseph Walsh, Enniskillen; James Robert Wallace, Bengal; Arthur Hickman, Edinburgh; George Frederick Wales, Belfast; William Francis Blyth, Dublin; James Harran, Dublin; Charles Harold Bloxsome, Sheffield; David Gault, Tyrone; Thomas Matthews, co. Down; Michael Doyle Foley, co. Kerry; George Edward Pollard, London; Arthur Nathaniel Davis, Mayo; Corneby Austin, Banbury; Gilbert Marshall, Armagh; Alfred William Fox Whitlock, Scarborough; James William Beeman Hodsdon, Bermuda; John Garbutt Hutchinson, Cumberland; John Galbraith Hyde, Stratford, Ontario; Theodore Arthur Weed, Cleveland, Ohio; Richard Condon Daly, city of Cork; Frederic John William Cox, Edinburgh; Reginald Latimer Wellington Greene, Antrim; David Henry Walsh, Bristol; William Albert Maurice de Watteville, Berne; Robert William Gentles, Jedburgh.

ROYAL COLLEGE OF SURGEONS, EDINBURGH.—The following gentlemen passed their First Professional Examination during the January sittings of the Examiners:—

Arthur William Egerton Brydges Barret, Bath; George Wm. Robinson, Huddersfield.

And the following gentlemen passed their Final Examination and were admitted Licentiates of the College:—

Horwasji Merwanji Hakim, Bombay; Manekshaw Jamshedji Kelawala, Bombay; Merwanje Dhunjebhai Karanjia, Bombay; Eduljee Sorabjee Chenai, Bombay; John Hugh Mackenzie, Cawnpore; James Hamilton Nicholas, Dublin; John Fell Edmund Cotman, Thorpe, near Norwich.

Mr. Frank Earle Huxley, of Birmingham, having passed the necessary examinations, obtained the Diploma of Dental Surgery.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—Since January 12 the following licentiates have been approved for admission as Members of the College, in accordance with the terms of the Supplemental Charter of December 12, 1878:—

M'Clintock, Alfred, 1851, Dublin.
Tyrrell, Gerard, 1859, Sacramento.
Davis, Francis, 1859, Fleet Surgeon R.N.
Meldon, Austin, 1865, Dublin.
Worthington, George, 1868, Sidcup.
Vance, James, 1868, Rathdrum.
Sibthorpe, Charles, 1869, Surgeon Madras Army.
John Neeson Stone, 1869, Staff Surgeon R.N.
Crookshank, Harry, 1871, London.
Vesey, Agmon, 1874, Magherafelt.
Duke, Alexander, 1874, Dublin.
O'Mullane, Eugene, 1876, Nottingham.
Courtenay, John H., 1873, Jamaica.
Grosholz, F. H. V., 1874, Aberdovey, Wales.
Emerson, Isaac B., 1874, Surgeon A.M.D.

(The figures after each name indicate the year of admission as Licentiate of the College.)

APOTHECARIES' HALL, LONDON.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, February 5:—

Pook, William John, 86, Devonshire-street, E.
Quicke, William Henry, Brinton Lodge, Brixton-road.
Redmond, Leonard, Grange Loughgall, Armagh, Ireland.

The following gentlemen also on the same day passed their Primary Professional Examination:—

Craddock, Sidney Ernest, King's College.
Norvill, Frederic Harvey, King's College.
Odling, Alfred Edward, St. Thomas's Hospital.
Tyrrell, Charles Robert, Middlesex Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to all new Appointments that take place.

POORE, VIVIAN G., M.D., B.S.—Professor of Medical Jurisprudence to the University College, Gower-street.

BIRTHS.

JONES.—On February 1, at Blackpool, the wife of Leslie H. Jones, M.D., of a daughter.

LORD.—On February 5, at Scotleigh, Chudleigh, Devonshire, the wife of R. G. Lord, M.D., Deputy Surgeon-General (retired), Indian Medical Service, of a son.

STOCKER.—On February 8, at Peckham House, Peckham, the wife of Alonzo H. Stocker, M.D., of a daughter.

MARRIAGES.

HARVEY—JOWERS.—On February 10, at Kilburn, Alfred Harvey, M.D., to Ada, only daughter of the late Henry John Jowers, Esq.

NICOLL—SIMONS.—On February 5, at Saintbury, Gloucester, Thomas Vere Nicoll, M.R.C.S., L.R.C.P., to Ada Gertrude, younger daughter of the Rev. C. W. Simons, M.A., rector of Saintbury.

ROGERS—MILLS.—On February 5, at St. Andrews Church, Dorset, Joseph Rogers, M.D., of 33, Soho-square, W., to Adriana Dewindt, only daughter of the late John Mills, Esq., formerly of The Whiteladies, Worcester, and Milliken Hall, Bishop's Hull, near Taunton, Somerset.

WADE—POWER.—On February 4, at Tooting, Willoughby Francis Wade, M.B., F.R.C.P., of 24, Temple-row, Birmingham, to Augusta Frances, only daughter of the late Sir John Power, Bart., of Kilfane, County Kilkenny.

WARD—TOONE.—On February 5, at Balby-cum-Hexthorpe, John Bywater Ward, M.D., of the Warneford Asylum, Oxford, to Frances, youngest daughter of the late William Wasteneys Toone, Esq., of Lambcote Grange, Yorkshire.

DEATHS.

CHAPMAN, HARRIET, wife of Walter Chapman, F.R.C.S., at Lower Tooting, Surrey, on February 9, in her 61st year.

EDDOWES, W., Surgeon-Major 35th Bengal Native Infantry, at 83, Strand-road, Sandymount, on January 17, aged 48.

MACTIER, THOMAS BINNEY, son of W. F. Mactier, M.D., late Bengal Service, at Kinnessburn, St. Andrews, Fife, on February 3.

SMITH, JOY CLEMENT, daughter of Clement H. Smith, M.D., Bengal Army, of Argyll Hall, Torquay, at Tunis, North Africa, on February 1, aged four months and a half.

STOKES, JOHN, M.D., at the Tavistock Hotel, Covent-garden, on February 1, in his 75th year.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BURTON-ON-TRENT INFIRMARY.—House-Surgeon. Candidates must be duly qualified. Applications, stating age, and accompanied by testimonials, to be sent to the Honorary Secretary, Mr. James C. Grinling, Burton-on-Trent, on or before February 20.

BURY ST. EDMUNDS FRIENDLY SOCIETIES' MEDICAL ASSOCIATION.—Resident Medical Officer. The successful candidate will be required to dispense medicines occasionally, and to undertake not to engage in private practice. Applications, stating age, etc., accompanied with testimonials, to be sent to Mr. J. Claydon, 9, Orchard-terrace, Bury St. Edmunds, on or before February 23.

District Infirmary, Ashton-under-Lyne.—House-Surgeon. Candidates must possess recognised medical and surgical diplomas. Applications, with testimonials, to be sent to the President, Hugh Mason, Esq., Ashton-under-Lyne, not later than February 25.

Great Yarmouth Hospital.—House-Surgeon. Candidates must be unmarried and duly registered to practise medicine and surgery. Applications, with testimonials, to be sent to R. R. B. Norman, Esq., Hon. Secretary, on or before March 18.

Leeds Union.—Assistant Medical Officer. Candidates must be unmarried, and not above thirty-five years of age, possessing a good knowledge of dispensing, with medical and surgical qualifications. Further particulars may be obtained on application to the Medical Superintendent of the Union Infirmary. Applications, with four recent testimonials, to be sent to Mr. John King, Clerk to the Guardians, on or before February 17.

Leith Hospital.—Assistant-Surgeon. Applications, with testimonials, to be sent to the Secretary, Mr. G. V. Mann, 33, Bernard-street, Leith, from whom further particulars can be obtained, on or before March 10.

Liverpool Northern Hospital.—Assistant House-Surgeon. Candidates must possess medical and surgical qualifications from one or more British colleges or institutions recognised under the Medical Act. Applications, with testimonials, to be sent to the Chairman of the Committee not later than February 28.

St. John's Hospital for Skin Diseases.—Clinical Registrars. Applications to be sent to the Board of Management by candidates who will give their services gratuitously. Further particulars can be obtained from St. Vincent Mercier, Esq., Secretary.

West London Hospital, Hammersmith-road, W.—Assistant-Surgeon. Candidates must be Fellows of one of the Royal Colleges of London, Edinburgh, or Dublin, and not practising midwifery or pharmacy. Applications, with copies of testimonials, to be sent to the Secretary, T. Alexander, Esq., on or before February 21.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Basford Union.—Mr. S. T. Davison has resigned the Carlton District: salary £30 per annum.

Glanford Brigg Union.—Mr. Walter Hugh Paterson has resigned the Broughton District: area 16,906; population 4479; salary £57 per annum.

Grantham Union.—The Spittlegate District is vacant: area 10,255; population 6399; salary £50 per annum. Also the Workhouse; salary £40 per annum.

Leeds Union.—Mr. A. L. Evans has resigned the office of Assistant Medical Officer at the Workhouse: salary £100 per annum.

Plympton St. Mary Union.—Mr. P. W. Govett has resigned the Fifth District: area 5930; population 3753; salary £60 per annum.

APPOINTMENTS.

Carnarvon Union.—Griffith R. Griffith, M.B. and C.M. Glasg., to the First Carnarvon District.

Ongar Union.—Thomas Spurgin, M.R.C.S. Eng. and L.M. Edin., to the Blackmore District.

Thirsk Union.—James F. Witz, L.R.C.S. Edin., L.R.C.P. Edin., to the Kilburn District.

West Ashford Union.—Wm. H. Coke, M.R.C.S. Eng., L.R.C.P. Lond., to the First District.

Wolverhampton Union.—Charles Broom, M.R.C.S. Eng. and L.S.A., to the Wednesfield District.

Dr. Duffin, Physician to King's College Hospital, and Professor of Pathology in its Medical School, has been appointed the additional Examiner in Practice of Physic at the University of Edinburgh.

The Irish Society.—At a meeting of the Common Council at Guildhall, on the 5th inst., Mr. William Clapton, F.R.C.S. Eng., was appointed Deputy-Governor of the Irish Society, of which Alderman Sir Sydney Waterlow, M.P., is the Governor.

British Medical Temperance Association.—The next quarterly meeting of the Association will be held in the Rooms of the Medical Society of London, 11, Chandos-street, Cavendish-square, London, W., on Thursday, February 12, 1880, at 4 p.m., when a paper will be read by Dr. C. J. Russell on "The Medical Profession and Total Abstinence," and Dr. Norman Kerr will present a communication on the use of alcohol during the menstrual period.

In Memoriam.—A cottage hospital, to accommodate about twenty patients, is to be built at Milnthorpe, near Kendal, in memory of the late Mr. John Kitching, M.R.C.S., who, after practising in South Audley-street, retired to Milnthorpe, his native place, where he practised for thirty years, and died on May 26 last, aged eighty-three years. The hospital is to be erected by his daughter, Mrs. William Bindloss, and his sister, Mrs. Thompson, as a memorial to the deceased.

Murchison Memorial.—The Committee are desirous of completing the arrangements connected with the above. A large number of subscriptions have been promised, some of which still remain unpaid. It is hoped that many more may yet be forthcoming. Since the last appeal was issued, the Committee have enlarged the scope of this memorial, so that all students of the London and Edinburgh schools may now compete for the Scholarship in Clinical Medicine which it is proposed to institute. This Scholarship should be of the value of at least £50 per annum, and to provide this further contributions amounting to £600 are desired. It is thought that no difficulty should be experienced in securing this sum to found a memorial worthy of so eminent and venerated a labourer in medical science. Subscriptions will be received by the Hon. Treasurer, Dr. Potter, 20, George-street, Hanover-square, W.: or by the Hon. Secretaries, Dr. Dyce Duckworth, 11, Grafton-street, Piccadilly; Dr. W. S. Greenfield, 15, Palace-road, St. Thomas's Hospital; and Dr. Byrom Bramwell, 4, Drumsheugh-gardens West, Edinburgh.

Second List of Subscriptions.

	£	s.	d.
Earl of Derby, K.G.	10	10	0
Sir W. Jenner, Bart.	5	5	0
Septimus Sibley, Esq.	5	0	0
W. Bowman, Esq., F.R.S. (*additional*)	8	8	0
Dr. G. H. Orton	1	1	0
Dr. Felix Semon	1	1	0
Dr. Gavin Milroy	1	1	0
Mrs. E. G. Anderson, M.D.	1	1	0
W. Mac Cormac, Esq., F.R.C.S. (*additional*)	2	2	0
J. M. Burton, Esq., Lee	2	2	0
Dr. Slight	3	3	0
Dr. John Harley (*additional*)	2	2	0
Dr. Joseph Walker	2	2	0
Dr. Jackson, Frant	2	2	0
Dr. Albert J. Bernays	3	3	0
Dr. Wardell, Tunbridge Wells	1	1	0
Lennox Browne, Esq.	1	1	0
Dr. Clifford Allbutt	1	1	0
Rev. H. Arnott, F.R.C.S.	2	2	0
Sir James Paget, Bart.	2	2	0
Dr. Boyd	2	2	0
Dr. T. J. Maclagan	1	1	0
Dr. C. J. Workman, Teignmouth	1	1	0
J. Dixon, Esq., F.R.C.S.	2	2	0
Dr. Bastian, F.R.S.	2	2	0
Dr. Frederic Weber	2	2	0
Spencer Watson, Esq.	1	1	0
Dr. P. M. Braidwood	2	2	0
Edgcombe Venning, Esq.	1	1	0
Dr. Broadbent	3	3	0
P. H. McKellar, Esq.	1	1	0
Dr. Guy	1	1	0
J. Stitt-Heslop, Esq.	2	2	0
Dr. George Johnson	2	2	0
Dr. Wane	2	2	0
Dr. Hall, Brighton	2	2	0
Dr. Adey, St. Leonard's-on-Sea	2	2	0
George Critchett, Esq.	2	2	0
Dr. W. O. Markham	1	1	0
Dr. G. A. F. Wilks, Torquay	1	1	0
An Old Patient, per Dr. Ralfe	5	5	0
Dr. F. T. Roberts	2	2	0
Dr. J. B. Siddall, Clifton	1	1	0
Erasmus Wilson, Esq.	2	2	0
Dr. Robert Elliot	1	1	0
Dr. Wilberforce Smith	1	1	0
Dr. C. Holman, Reigate	1	1	0
Dr. Pearson	1	1	0
Dr. Granville Bantock	2	2	0
W. Scott, Esq.	2	2	0
Dr. R. Brisco Owen, Beaumaris	1	1	0
Dr. Withers Moore, Brighton	2	2	0
Dr. W. Hardman, Blackpool	2	2	0
Dr. W. Vaudrey Lush, Weymouth	1	1	0
Joseph Prestwich, Esq., Oxford	12	12	0
Professor Fraser, Edinburgh	2	2	0
Jas. Moncrieff Arnott, Esq.	5	5	0
Chas. Falconer, Esq., F.G.S.	25	0	0
Dr. Noel Guéneau de Mussy	3	3	0
Dr. W. Arding, Wallingford	1	1	0
Dr. C. B. J. Williams	3	3	0
Dr. Allfrey, St. Mary Cray	1	1	0
A. Campbell Swinton, Esq., Kimmerghame	3	3	0
Dr. Douglas Powell	1	1	0
Professor Acland	2	2	0
Dr. W. C. Coles, Bourton-on-the-Water	1	1	0
The Dean of Lichfield	1	1	0
Rev. Dr. Nolan	1	1	0
Berkeley Hill, Esq., F.R.C.S.	3	3	0
J. W. Hulke, Esq., F.R.C.S.	5	5	0
Dr. Risdon Bennett	3	3	0
Surg.-Maj. W. Stewart, M.D.	1	1	0
Dr. Fyfe	1	1	0
Dr. F. J. Mouat	1	1	0
Dr. H. Guéneau de Mussy	10	10	0
Alexander Shaw, Esq.	10	10	0
G. C. Child Chaplin, Esq., Arbroath	1	1	0
Messrs. Harper & Jackson, Barnstaple	1	1	0
Dr. John Rae, LL.D.	1	1	0
Rev. J. Wale Hicks, Cambridge	1	1	0
Surgeon-Major Alexander Grant	1	1	0
Dr. Joseph Clegg, Epping	1	1	0
Miss L. Milne	5	0	0
Dr. Vereker-Bindon	1	1	
Professor Charcot, Paris	3	0	0
Dr. Branfort, A.M.D., Madras	1	1	0
Professor Aitken, Netley	1	1	0
Professor Frerichs, Berlin	3	0	0
Professor de Chaumont, Netley	1	1	0
South Wales and Mon. Branch British Medical Association, per Dr. Sheen	2	2	0
Dr. W. S. Playfair	2	2	
Andrew Murray, Esq., Aberdeen	3	3	0
Dr. Ford Anderson	1	1	0
J. Spicer, Esq., Alton, per Dr. Glover	2	2	0
Dr. Wilbraham Falconer, Bath	2	2	0
Surgeon-Major Geo. Perry	1	1	0
Dr. J. F. Payne	5	5	0
Professors, Calcutta Medical College, per Dr. D. B. Smith, Principal	33	9	1
Medical Officers at Allahabad, Bombay, per Shirley Deakin, Esq., F.R.C.S.	3	5	3
Medical Men practising in Ceylon, per W. R. Kynsey, Esq., Colombo	15	16	4
T. M. Miller	1	1	0
T. W. Giles	1	1	0
W. G. Lightfoot	1	1	0
T. W. Elliott, Esq.	1	10	6
W. G. Ranger, Esq.	1	10	6
G. T. Rossiter	2	2	0
H. F. Banham	3	3	0
G. A. Crick	1	1	0
T. C. Charles, M.D.	2	0	2
A. Foxwell	1	1	0
T. W. Clarkson	1	1	0
T. F. Powell	1	1	0
C. K. Morris	1	1	0
F. Walters	1	1	0
O. Roberts	1	1	0
F. Heygate	1	1	0
C. Gripper	1	1	0
T. H. Battye	1	1	0
W. Wilson, M.D.	1	1	0
W. W. Groome	1	1	0
A. G. Bowen	0	10	6
R. Liebreich, Esq.	3	3	0
R. W. Reid, M.D.	2	2	0
D. S. Davies	1	1	0
A. B. Carpenter	1	1	0
W. Fell	1	1	0
A. Odling	1	1	0
A. Luyard	2	2	0
Dr. Moorhead	5	5	0
Dr. Smith Shand	1	1	0
Dr. Stewart Leckie	2	2	0
Professor Gairdner	5	5	0
Dr. Struthers	2	2	0
Dr. Cleghorn	1	1	0
Dr. Krieckenbeck	1	1	0
Dr. John Brown	1	1	0
Dr. R. Moir	5	5	0
Dr. Angus Macdonald	5	5	0
Dr. Haldane	2	2	0
Dr. C. Muirhead	5	5	0
Dr. G. H. Balfour	2	2	0
Amount previously advertised	546	3	6

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

C. W. B., Peckham.—Try the library of the Royal College of Surgeons; but we would strongly dissuade you from reading a number of treatises. Stick to one good book on each subject.

A Third Year's Student.—Yes; students of any of the metropolitan hospitals will be admitted to the lectures at the College of Surgeons on making application.

Lieutenant Fergusson.—We regret to state from a private letter that it is feared that the severe wound received by this gentleman will terminate in the loss of his right eye. He is the second son of the late Sir William Fergusson.

Buried by Fire.—The following figures demonstrate the progress of cremation on the Continent. During the last four years there have been fifty cases of fire-burial at Milan, and ten at Lodi—viz., two in 1876, fourteen in 1877, fifteen in 1878, and twenty-nine in 1879. Several have already taken place this year.

A Tutor.—On reference to our advertising columns you will see that the next preliminary examination in Arts, etc., for the diplomas of Fellow and Member of the Royal College of Surgeons will take place at the University of London on the 2nd, 3rd, and 4th prox.; but your application should be addressed to Mr. Trimmer, at the Royal College of Surgeons, Lincoln's-inn-fields.

Cabmen's Shelters.—A police magistrate in his judicial capacity has, without doubt, many opportunities of judging of the hardships of a cabman's occupation. A noticeable instance of considerate regard for his well-being has just been shown by the Marylebone police magistrates, who have given a donation of £25 to the Cabmen's Shelter Fund, for the purpose of erecting a shelter in Oxford-street. A lady has promised to place, at her entire cost, a shelter on a site at the Victoria Station, recently recommended to the Committee of the Fund by the magistrates of Westminster.

Alleged Milk Adulteration: Rival Dairy Companies.—At Marylebone Police-court, lately, a milk-seller, trading as the Wiltshire Dairy Company, was summoned by the Metropolitan Dairymen's Society for selling milk adulterated with water. The analyst stated that the milk in question contained 7 per cent. of water, but it was usual on analysis to allow for 5 per cent. The defendant alleged that the poorness of the milk was due to the effect of the cold weather upon the cows, and that the smallness of the quantity of water showed that it could not have been added for the sake of profit. He further contended that the prosecution had been instituted by a trade society who wanted to keep up the price of milk, whereas his company sold it at a reduced price. The magistrate accepted the defendant's defence as to the poorness of the milk, and dismissed the summons.

Tea-Testing (? Tasting) Extraordinary.—At a meeting of the Camberwell Board of Guardians, several tenders for the supply of tea to the workhouse were considered. One guardian "concluded all the samples sent in were very bad"; another member said that "on a former occasion he gave the samples to his wife, with a request that they should be tested at breakfast. Unfortunately his wife then mixed all the samples together, and he was therefore incapable of giving an opinion. On the present occasion he had given instructions to have the test properly conducted. He believed that had been done, but unfortunately he had left the paper at home, so that he was again unable to give an opinion." Another guardian said "he had no means of getting the samples tested, so he mixed them all up together, and gave them to a poor woman who occasionally called at his house, and she had reported that the tea was very nice"! Ultimately one of the tenders was accepted.

A Flaw in the Law.—The law affecting baby-farming still discloses loop-holes for delinquents, which are to be regretted. The following case is especially noteworthy on account of the remarks of the judge on passing sentence upon the prisoner. A woman was tried at Chester last week, charged with cruelly ill-treating a female child placed in her care, by neglecting to provide it with sufficient food. The child had been placed with the prisoner by its mother, a domestic servant, with the payment down of £5. In November last a police-inspector discovered the child lying in a basket in front of a fire, in a terribly emaciated condition. It was eighteeen months old, but weighed only 8 lb. 2 oz. But this was accounted for by the evidence produced, namely, the only nourishment it was allowed was some skim-milk twice a day, at morning and night. "It had nothing but the dry bottle to suck at all day." There was some doubt as to whether the child had not inherited disease, and the woman was therefore only charged with criminal neglect. She was found guilty, and sentenced to six months' hard labour, the judge remarking that "this was a terrible offence, which the law relating to manslaughter had probably not contemplated. It was becoming a common vice and crime, that persons who had illegitimate children got rid of them to those who had no natural affection, and who neglected them and caused their death."

Health of Dover.—Dr. Robinson, Medical Officer of Health of Dover, reported to the Town Council last week that the average death-rate in Dover during the year 1879 was 15 per 1000.

A Sanatorium, Brighton.—The Brighton Town Council has purchased, at a cost of £5000, a site for a sanatorium, lying eastward from the Lewes-road on the boundary of the parish.

Steam Boiler Fatalities.—The report of the Manchester Steam Users' Association during the past year shows that the Association had recorded 25 steam-boiler explosions, killing 40 persons and injuring 52 others. Of the 40 persons killed, 33 were men and 7 were children; while of the 52 injured, 48 were men, 1 was a woman, and 3 were children. Several of the injured were altogether outside the works at which the explosions occurred. Fourteen inquests were held during the year, and in one case the coroner expressed his regret that there was no Government examination of boilers, and in three others the jury recommended the enforcement of competent periodical inspection by law.

The Poor, and Medical Attendance.—At an inquest held at Manchester on the body of a chimney-sweeper, it appeared that the deceased was taken ill on the previous Friday night after going to bed. He grew worse, lost consciousness, and died at four o'clock on the following morning. Two of his neighbours, being informed of his condition, went, at one o'clock on the Saturday morning, to a doctor, and stated the urgency of the case, but were told by his assistant that he could not come. Another doctor was seen, who said he would come at six in the morning, if required. Afterwards the surgeon at a dispensary was applied to, but he could not attend the man because "he was not in his district." A verdict of "Death from natural causes" was returned, with the following presentment to the coroner:—"The jury having had before them the cases of fruitless applications in a case of emergency to several medical men in succession to attend, and the probable fatal results of such want of medical aid, strongly recommend to the Poor-law and other authorities the adoption of some plan by which it shall be made compulsory upon the Poor-law surgeons to attend forthwith upon any application in cases of sudden illness or emergency, the remuneration for such attendance, as also for the attendance of any surgeon not officially employed, being afterwards settled by the board of guardians, to be either chargeable upon the rates where the friends are too poor to pay, or if not, to be paid by the friends themselves. That it would be desirable to extend the same principle to surgeons of hospitals, so far as may be practicable, the question of their payment to be determined by the representative committees."

Health at Beaumaris.—The Clerk to the Burial Board has reported to the Board that no interment has taken place in the cemetery, the only public burial-ground in the parish, for the last three months.

On dit.—Mr. Toole is credited with saying to a friend on returning to his dressing-room after the first act in *Paul Pry*, "That did me more good than a wilderness of doctors, an ocean of lotions, and a square acre of Brighton air."

Presents to Children's Hospitals.—Recently nearly every children's hospital in the United Kingdom—numbering more than one hundred—has received a present of forty copies of the "Little Folks' Painting-Book," painted throughout by readers of *Little Folks' Magazine.*

Pauper Nurses.—The Local Government Board have taken steps to insure that all offices of trust and responsibility in workhouses shall be filled up by paid officers and assistants, and in the new infirmaries pauper help is almost entirely abolished.

Arctic Exploration.—Yes; it is reported that Dr. Richardson has joined the Committee of the London Central Arctic Committee, for the proposed expedition to the North Pole under Commander Cheyne, and that he will superintend the victualling of the ships of the expedition.

Inquirer.—The practice of presenting to the army medical officers copies of the Army Medical Reports was stopped, we believe, on the suggestion of the Army Medical Controller. Copies are sent to all the general hospital stations, where they are preserved for consultation.

COMMUNICATIONS have been received from—

Dr. J. M. Bruce, London; Dr. Clement Godson, London; Dr. Eklund Stockholm; Dr. B. Nicholson, Shepherd's Bush; The Honorary Treasurer of the Murchison Memorial Fund; The Assistant-Secretary of the Irish Medical Association; Mr. Linington Ash, Holsworthy; The Honorary Secretaries of the Harveian Society of London; The Registrar of Apothecaries' Hall; The Secretary of the National Orthopædic Hospital; Dr. C. Meymott Tidy, London; The Honorary Secretary of the British Medical Temperance Association; Mr. W. T. Cooper, London; Mr. C. J. Cullingworth, Manchester; Mr. Shirley F. Murphy, London; The Secretary of Charing-cross Hospital; The Secretary of the Royal Medical and Chirurgical Society of London; Mr. J. Chatto, London; The Honorary Secretary of the Medical Society of London; The Secretaries of the Pathological Society of London; Mr. T. M. Stone, London; Mr. R. Lyell, London; Mr. M. Smale (Guild of St. Luke), London; Surgeon-Major Kidd, London; The Secretary of the Royal College of Surgeons, Edinburgh; The Secretary of the Royal Institution; Dr. J. Matthews Duncan, London; Mr. H. D. Reed, London; Mr. W. C. Biden, London; Mr. J. Hamilton Craigie, London; The Registrar-General, Edinburgh; Messrs. Young and Postans, London; Dr. J. W. Moore, Dublin; The Secretary of the Statistical Society, London; The Honorary Secretary of the Society of Medical Officers of Health.

BOOKS AND PAMPHLETS RECEIVED—

Neville Hatherley, by Stenton Eardley, B.A.—Valedictory Address, by W. F. McNutt, M.D., L.R.C.P.—Letts's Book-Post Rollers—The Waters of Kreuznach, by Charles Engelmann, M.D.—Cancer of the Rectum, by W. Harrison Cripps, F.R.C.S.—Climates and Health in South Africa, by Jas. Bonwick, F.R.G.S.—Our Water Supply—The Guild of St. Luke, Anniversary Address for 1879, by Alfred Meadows, M.D.—Annals of the Anatomical and Surgical Society, 1878-79—Monthly Return for January, 1880, of the Births, Deaths, and Marriages in the Eight Principal Towns of Scotland.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Centralblatt für die Medicinischen Wissenschaften—Gazette Hebdomadaire—Louisville Medical News—Nature—Revue Médicale—El Siglo Medico—Galveston Medical Journal—Weekly Return of Births and Deaths—Journal des Sciences Médicales—Revista de Medicina—American Journal of the Medical Sciences—North Carolina Medical Journal—London Association for Protection of Trade List—Practitioner—Anti-Vivisectionist—El Observador Medico—Giornale Internazionale delle Scienze Mediche—Boston Journal of Chemistry—Western Daily Mercury, February 4—Sunday Times.

APPOINTMENTS FOR THE WEEK.

February 14. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

Royal Institution, 3 p.m. Prof. Pauer, "Sebastian Bach" (with Musical Illustrations).

16. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. Mr. H. F. Baker, "On the Treatment of Genu Valgum without Division of Bone." Dr. Thudichum, "On Polypus in the Nose, and its Connexion with Asthma; with a New Mode of Treating Asthma, Bronchitis, and Consumption by the Inhalation of the Pyrolytic Vapour of Vegetable Alkaloids and Extracts."

17. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Pathological Society (Council Meeting), 8½ p.m. Dr. Goodhart—1. Congenital Occlusion of Duodenum; 2. Gangrene of Colon. Mr. Startin—Drawings of Skin Diseases. Dr. Gilbart Smith—Epithelioma of Pharynx. Dr. F. Semon—Epithelioma of Larynx. Mr. Nunn—1. Secondary Tumour after Removal of Breast; 2. Epithelioma of Penis; 3. Melanosis of Finger. Mr. Walsham—Sarcoma of Spermatic Cord. Mr. MacMahon—Cancer surrounding the Colon. Dr. S. West—Blood-Casts from the Bronchi. Dr. Squire—Micro-Photographs of the Blood in Yellow Fever. Dr. W. Ewart—1. Cicatrices on the Air-Passages and Fibroid Disease of Lung from Syphilis; 2. Diaphragmatic Hernia.

Royal Institution, 3 p.m. Prof. Schäfer, "Physiology of Muscle."

Statistical Society, 7¾ p.m. Mr. Thomas A. Welton, "On Certain Changes in the English Rates of Mortality."

18. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Lister), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.; National Orthopædic, Great Portland-street, 10 a.m.

Association of Surgeons Practising Dental Surgery (Council Meeting, 8 p.m.), 8½ p.m. Mr. Hamilton Cartwright, "On the Recognition of certain Constitutional Lesions by means of Examination of the Teeth and Mouth."

Guild of St. Luke (59, Mortimer-street, Cavendish-square), 7½ p.m. Mr. A. K. Willis, "On Moderation as applied to Alcohol."

19. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

Harveian Society, 8½ p.m. Dr. Alfred Meadows, "On Cases of Gynæcology." Dr. Broadbent, "On Venesection."

Royal Institution, 3 p.m. Prof. Dewar, "Recent Chemical Progress."

20. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

Royal Institution (Council Meeting, 8 p.m.), 9 p.m. Rev. W. R. Haweis, "Old Violins."

Society of Medical Officers of Health, 7½ p.m. Dr. G. B. Longstaff, "On some Facts bearing on the Etiology of Summer Diarrhœa" (illustrated by Diagrams).

VITAL STATISTICS OF LONDON.

Week ending Saturday, February 7, 1880.

BIRTHS.

Births of Boys, 1360; Girls, 1324; Total, 2684.
Corrected average in the 10 years 1870-79, 2670·0.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	1605	1771	3376
Average of the ten years 1870-79, corrected to increased population	863·4	855·3	1718·7
Deaths of people aged 80 and upwards ...	...	...	162

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa
West	561359	...	5	8	1	30	...	3	...	2
North ...	751729	1	6	12	2	34	...	1	...	3
Central ...	334369	..	5	4	2	25	...	3	1	...
East	639111	4	7	15	...	28	...	2	4	1
South	967692	8	11	27	1	101	...	8	1	5
Total	3254260	13	34	66	6	248	...	17	6	11

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·978 in.
Mean temperature	38·8°
Highest point of thermometer	48·6°
Lowest point of thermometer	23·0°
Mean dew-point temperature	37·6°
General direction of wind	S.W.
Whole amount of rain in the week	0·25 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, Feb. 7, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1880.*	Persons to an Acre. (1880.)	Births Registered during the week ending Feb. 7.	Deaths Registered during the week ending Jan. 7.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In centimetres.
London	3664149	48·6	2684	3376	48·6	23·0	38·8	3·78	0·25	0·63
Brighton	107321	45·6	64	48	45·5	29·6	38·1	3·39	0·75	1·90
Portsmouth ...	134224	29·9	81	68	...	...	...	...	...	...
Norwich	85827	11·5	70	49	49·2	30·0	41·0	5·00	0·12	0·30
Plymouth	74993	53·8	40	38	51·2	35·5	45·2	7·33	0·61	1·55
Bristol	213536	48·0	144	122	52·5	30·3	42·5	5·84	0·25	0·63
Wolverhampton ...	75970	22·4	51	24	47·4	30·8	39·5	4·17	0·32	0·81
Birmingham ...	394738	47·0	315	160	...	...	...	...	...	...
Leicester	129912	40·6	109	56	...	...	...	...	...	...
Nottingham ...	173627	17·4	113	107	51·6	27·9	39·7	4·28	0·13	0·33
Liverpool	544056	104·4	370	290	52·4	29·4	43·4	6·33	0·25	0·63
Manchester ...	363130	84·6	273	220	...	...	...	...	...	...
Salford	185786	35·9	117	95	...	...	...	...	...	...
Oldham	115413	24·7	72	49	...	...	...	...	...	...
Bradford	197196	27·3	109	96	52·8	28·0	44·1	6·73	0·00	0·00
Leeds	318929	14·8	208	167	55·0	28·0	42·1	5·62	0·03	0·08
Sheffield	304938	15·5	205	129	55·0	33·5	43·9	6·61	0·31	0·79
Hull	149627	41·2	116	93	49·0	31·0	40·4	4·66	0·33	0·84
Sunderland ...	116780	42·2	63	64	58·0	35·0	45·4	7·44	0·02	0·05
Newcastle-on-Tyne	149366	27·8	86	61	...	...	...	...	...	...
Edinburgh	229839	54·8	144	98	55·1	35·2	45·4	7·44	0·74	1·88
Glasgow	589598	97·7	349	277	53·5	38·3	45·1	7·28	0·41	1·04
Dublin	314666	31·3	200	257	56·8	28·6	45·6	7·56	0·80	2·03
Total of 23 Towns in United Kingdom	8633571	39·2	5983	5944	58·0	23·0	42·5	5·84	0·33	0·84

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·98 in. The highest reading was 30·28 in. on Tuesday morning, and the lowest 29·31 in. at the end of the week.

* The figures for the English and Scottish towns (except for Nottingham, Salford, and Oldham) are the numbers enumerated in April, 1871, raised to the middle of 1880 by the addition of nine years and a quarter's increase, calculated at the rate which prevailed between 1861 and 1871. Revised estimates have been adopted for Nottingham, Salford, and Oldham, based upon special returns of inhabited houses existing within those boroughs. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE
ON SOME
INFLAMMATIONS OF THE PUDENDUM.

By J. MATTHEWS DUNCAN, M.D., LL.D.,
Physician-Accoucheur and Lecturer on Midwifery at St. Bartholomew's Hospital.

The diseases which form the subject of my present lecture compose a natural group, of only some members of which have we had examples in "Martha" recently. I call them inflammations of the pudendum; but they are often called inflammations of the vulva, and sometimes of the vestibule. But the words "vulva" and "vestibule" imply only areas, whereas the word "pudendum" (or pudenda) implies parts, and therefore appears to me to be preferable.

I shall get over a large subject to-day, because I intend to say almost nothing about symptoms or about treatment; because, in the case of the inflammations of which I am to speak, to go over the symptoms and treatment would be to repeat a thrice-told tale. The diagnosis, indeed, I shall pass over briefly. In general it is very easy; and in a former lecture on cysts and tumours of the pudenda I made some remarks on diagnosis which are applicable to this set of diseases.

Inflammation of the labia is almost certainly the cause of one form of atresia that is seen in infants, the labia majora cohering; that is a disease which, being intra-uterine, we cannot, of course, see, and know it only from its results. The labia majora are liable in children to noma, a disease which I have seen affecting the mouth, but which I have never seen affecting the private parts. I might here make some interesting remarks upon the mutual pathological resemblances of the face and the ano-vulvar region, a subject which is well illustrated by this disease and lupus, and several other morbid conditions which specially affect these two parts. Follicular vulvitis, or vulvar folliculitis, is said to be a common disease, but I have never seen a good example of it. I am familiar with it from the descriptions and pictures in books; but I have never seen it in nature, and therefore shall say nothing about it. Erysipelas of the pudendum is not uncommon. It is extremely dangerous in lying-in women. Sloughing of the private parts—a condition in some cases resembling hospital gangrene—occurs in infants after fevers, and also in women after delivery. When it does occur, the patients generally die, though I have seen them recover after extensive destruction of the private parts. In such cases you have either complete cicatricial closure of the vagina, or partial closure—that is, stricture of the external orifice of the vagina—as the result of the healing up of the great raw surface left by the separation of the sloughs. You must distinguish these great gangrenes from what may be called healthy sloughing, which is not at all uncommon after what is an ordinary, if not a natural, delivery. If you examine lots of women after delivery, especially primiparæ, you will often find dark-coloured sloughs of the hymen, or of tags of mucous membrane torn up at the orifice of the vagina, or even of a pile at the anal orifice. Such sloughs, as I say, are not at all rare, and have little clinical importance, though great clinical interest.

Passing over these various diseases, I have said that the group on which I am lecturing to-day is of great interest. It exemplifies admirably the influence of epoch in establishing the tendency to disease; different diseases affecting different epochs of life. I use the word "epoch" in place of the word "age," which I should otherwise naturally employ, because this latter is misleading; suggesting that what I refer to is the influence of growth and adolescence or decrepitude and senescence. No doubt adolescence and senescence have great influence; but, entirely apart from this, there is an influence exerted by epoch, which the diseases I am lecturing upon to-day illustrate, and which ought probably to be discussed as a part of what we nowadays call "atavism."

The little I have to tell you very well illustrates another important point in your education. Nothing facilitates study more than the change of mere knowledge into understanding, improving mere memory by adding to it varied intelligence concerning the subject remembered. Few people have any difficulty in remembering a thing which they understand. If you, in addition to being told a thing, see it, still further if you feel it, you are much more likely to remember it than if you are merely told it. Herein is an advantage of clinical study over systematic lecturing. But if, in addition to seeing and feeling, you have other ideas associated with a matter, which constitute a wider and more profound scientific knowledge, you can scarcely forget it.

Characteristic vulvitis infantum is a disease confined to childhood: not vaginitis, which is a disease of maturity and advanced years. Characteristic acute vaginitis may be said to be peculiar to maturity or the child-bearing period of life.

In mature life you have acute inflammations of the labia, and of the glands of Cowper, and of their ducts—diseases which you almost never see either in youth or in old age.

Then you have another important epoch, namely, the recurring periods of pregnancy and the puerperal state—an epoch marked by hypertrophy and œdematous conditions of the labia not seen at other times.

In old age you have a series of inflammations characterised by the symptoms (terrible, when well marked) of pruritus, which gives its name to the morbid conditions consequent upon inflammations of a chronic kind affecting chiefly the skin and mucous membrane, producing conditions known as erythema or dermatitis, generally with hypertrophy, and often with eruptions.

There are two diseases which are so rare that I cannot classify them according to epoch at all, namely, progressive gangrene and progressive suppuration. They are so important that I cannot pass over them without a few words. I give them the name "progressive" because they have analogies with diseases in the lower animals that are so named, and are very much better known, for evident reasons, than are the analogous diseases in woman. In the lower animals these are attributed each to its special bacterium; and, in the present state of science, I have no hesitation in ascribing each to its special bacterium in woman also—one species causing gangrene, another suppuration.

Progressive gangrene is a disease that I have only seen in one case, and I know of no other. It occurred in a lady who was suffering from perimetritis, and the progressive gangrene came and went while the perimetritis was going on; it was an interlude in the course of a long perimetritis with suppuration. This case was rare in its issue, for the patient recovered and lived for many years. The skin is not primarily attacked as in erysipelas or in the sloughing of the labia which you see in infants and sometimes in lying-in women. It is a disease known as occurring in the scrotum of males, and it used to be supposed to depend upon infiltration of urine; but it has been shown to occur independently of any disease or injury in the urinary passages. It occurs around the rectum and also in the neck, and it has received the names of "areolar inflammation and sloughing," "inflammatory œdema," and also "sloughing cellulitis." I have given it the name progressive gangrene. In my case, with slight access of fever, there appeared much swelling chiefly affecting one side of the perinæum. The skin over this swelling was of a dusky leaden colour; and the swelling itself could be felt, per vaginam and per rectum, to pass high up into the excavation of the pelvis; it was not very tender and had a boggy feeling. When the knife was put into it, matter did not escape, but an ugly ichorous brown serous fluid, and after the escape of this there came at intervals plenty of sloughed cellular tissue, and lastly plenty of pus. The destruction of cellular tissue was so great in my patient that I thought she could never recover the retaining power of her anus and the proper use of the lower part of her rectum. Before the healing commenced you could pass your finger round the great sacro-sciatic ligament standing as a bare beam in the midst of the discharge. The patient was young and otherwise of sound constitution, and it was not long before, upon a superficial examination, you would have discovered nothing wrong but a cicatrix, and she had a perfect use of all the parts in that neighbourhood.

Progressive suppuration is a commoner disease, of which I have seen several examples; it occurs in old and middle-aged women; and I have not seen it in young girls. It is a cold abscess, or rather a nearly endless series of cold abscesses, which mature slowly and burst, or are opened and leave behind them very little cicatricial deformity. Before

one is closed, or soon after, another appears; and so it goes on for months, until in some cases the general health of the patient is completely destroyed; yet I have never seen it prove fatal. The worst case I have met was that of a lady who came to me from America with this disease. She had an ever-recurring formation of cold abscesses in some part of either labium majus. She stayed under my care for several months, and she left for the South of France by my advice, no better than when she came to me. I know that she recovered; but you will understand from this history how tiresome this disease is. It may recur after appearing to be cured. The only special treatment which I have seen to be apparently beneficial is the inunction of mercurial ointment. One old lady asserted that she was cured by this applied for a few days over the whole vulva, and that without any hydrargyrismus being induced. This disorder is not pyæmic, because the abscesses are confined to one part; and it is not dependent upon disease of glands, for there are no glands in the part affected. A somewhat similar disease everyone is familiar with, occurring in the axilla, where, however, it is connected with the glandular structures of that region. The same is true of a disease somewhat analogous, the submaxillary suppurations, which leave great cicatricial deformity. The disease is not, however, without closer analogues: there is a disease of children, constituted by the same kind of suppuration, in the throat, which I have more than once seen fatal,—not the mere retropharyngeal abscess, which I have no doubt you have heard of. Another analogous disease occurs in the mamma, and is one of the most tiresome maladies that I know; the repeated healings and renewed suppurations going on until every part of the areolar tissue in and around the gland has been affected. This I have seen both during pregnancy and after delivery.

Passing over these two important diseases, I come to the vulvitis of childhood. This is a disease characterised by little swelling of the otherwise healthy pudenda, with redness, sometimes with impetiginous eruption, sometimes with a red papular spotting. A laudable, rather viscid pus covers the whole surface. It is simply an inflammation affecting only the external parts, including the hymen. I have never seen a case complicated by vaginitis, except of the very lowest part of the passage adjoining the hymen. The inguinal glands may be a little enlarged and tender: I have never seen anything to be called a bubo. I have said this is a disease of childhood, and the only exception to this that I have seen was in a very young strumpet whose age was certainly not above sixteen: in that woman there was the ordinary virulent gonorrhœa, but, apart from that, her vulva was inflamed, and secreting pus exactly as in the characteristic vulvitis of young children. The vulva is often swollen and tender, and so are the inguinal glands, in venereal gonorrhœa, but not secreting pus as in the young girl referred to. This disease used to be believed to be the result of sexual violence; and in every case of it you should keep your eye open to the possibility of this, and look for contusions. If injury is recent you look for semen on the person or upon the linen of the child. It is certain that, under the influence of supposing venereal violence to be the common cause of the discase, a great number of unjust punishments have been inflicted upon men.

Vulvitis of children generally occurs as a consequence of cold, and it is liable to recur. It is generally easily cured, and of its treatment it would be useless to say anything, so well is it given in systematic lectures and text-books. I have seen it as often among the rich as among the poor; and I mention this because in almost every book you are told that dirt and worms are two chief causes of it. Now, I do not believe it, because dirt is very common, and I have found no reason in my experience for thinking that dirt produces it more frequently than cleanliness. In the same way it is said to be due to worms. Now, while I have seen many cases of worms without it, I have never seen a case of vulvitis that I could ascribe to worms. And I believe that this is an illustration of the injurious tendency to repeat what has been said before. Because one author of repute says a thing, everyone repeats it. Every one of you has been taught that worms cause convulsions in children; but, were I lecturing on the subject of convulsions, I should make the same sceptical remarks on that head. I never saw a case of convulsions that I could reasonably trace to worms, and I never saw a case of worms that caused convulsions.

The only inveterate case of vulvitis in the infant that I have seen was in a child remarkably well cared for; it was repeatedly cured with lead lotion, and at length we traced the disease as spreading from one of the ducts of a Cowper's gland, which the treatment did not affect beneficially.

I have told you that acute vaginitis is a disease of adult life, and that it is not the subject of my lecture to-day; but there is a very important disease of middle life affecting these parts, the common acute abscess produced frequently as a result of violence, and frequently as the ulterior result of a hæmatoma. I say nothing about this disease, for unless I were to go through the rigmarole of redness, pain, heat, and swelling once more, I should have nothing to narrate.

The affections of the vulvo-vaginal glands, however, are important, and must be discussed with some care. Abscess round the duct of a Cowper's gland has the same physical characters as the cyst of this duct which I have described in a former lecture. I think this is the reason why abscess of the duct of Cowper's gland is described under that designation. If you look at the pictures of cyst of this duct, and of abscess of this duct, and of abscess of the posterior part of a labium, you will find that they are all identical. Now, I teach you that there may be an abscess of the posterior part of the labium around a duct of a Cowper's gland; but I know no way of distinguishing it from an ordinary abscess of the posterior part of the labium—that is to say, I know of no means of diagnosing abscess of the duct from abscess of the posterior part of the labium.

Inflammation of the glands themselves is not rare; I have seen several cases of it. Chronic inflammation with enlargement of the gland I have seen, and also without the enlargement; and the cases have presented, as their chief symptom, painful sitting. When you have this disease you feel a little lump the size of a large pea, if the gland is not hypertrophied and indurated; but if hypertrophied it may be as big as a small chestnut; and it lies between the posterior pier of a labium and the adjoining tuber ischii. Of that inflammation and its treatment I shall say nothing, because I know nothing special about it. It sometimes goes on to abscess of the gland of Cowper, and that is well worth noticing. If you look into books on the diseases of women you will find this abscess confused with abscess of the duct. Abscess of the gland is depicted just as a cyst of the duct or an abscess of the duct is depicted. This is an error; or, at least, it was not so in the cases that came under my observation, for in them there were swelling and deformity between the posterior part of the labium and the adjacent tuber ischii. The two cases of this disease which I remember best occurred in otherwise healthy virgins; in one of them as the result of exposure to cold, for she was taken ill after coming from a ball in a stormy winter night. In both these cases the matter discharged itself very imperfectly, as you will easily understand when I tell you that it was through the duct of the gland. In one case the disease lasted for years, and the woman was supposed by various physicians to have ulceration, or vaginitis, not what was really the case. This disease I must speak of only from the examples I have seen, and they point out that the opening of the abscess in the situation of the swelling between labium and tuber ischii is not sufficient. In both my cases pus was evacuated by this method, but the disease was not thereby cured; suppuration continued, and it was only after laying open the whole duct of the gland by a large incision that healing up was obtained. The duct of the gland was easily found, because in both it was dilated, and a probe-pointed bistoury could be passed along and the necessary incision easily made.

Another very important disease of this part is gonorrhœa of the duct. Of this disease I have seen three examples, and in only one of them had we any doubt as to whether it was caused by venereal gonorrhœa; in two there could be no doubt. In all of them, after the vaginal disease was cured, the gonorrhœa of the duct persisted. The disease was easily diagnosed by pressure upon the duct making matter flow from the little orifice near the insertion margin of the hymen; and it was evident in all of them that the duct was dilated, for you could make, and I did make as a demonstration to students, at least two or three drops come in successive pressings upon the course of the duct. These cases were treated upon ordinary principles. One appeared to need only the passing of a large probe to cause its cure; in one of them it was necessary to inject solution of nitrate of silver by means of the apparatus used by oculists for injecting the lachrymal duct. These diseases

may appear to you to be trivial, and in a pathological sense they are so; but in another light, that of the patient's interest, they are of great importance.

I now wish to say a very few words about the diseases of the vulva in pregnancy. The chief of these are congestion, hypertrophy, inflammation and induration, and œdema of the labia majora. Chronic inflammation with induration is often a hard inflammatory œdema, but sometimes you have a soft œdema—that is, one which pits on pressure; and this soft œdema is evidently connected with a degree of inflammation, although not always. For it is worth while here to mention to you that in multiparæ you have sometimes œdema, rarely enormous, of the lower part of the abdominal flap, and in such cases you have œdema of the labia, and these conditions are not uncommon in cases of large abdominal tumours; but I do not describe these, because they are not inflammatory. I cannot, indeed, enter at any length upon the inflammatory diseases of the pudenda of pregnant and lying-in women. They are frequently associated with similar conditions of the vagina. They bear great resemblance to the diseases of old age, except that they are more certainly connected with vascular congestion, more temporary in accord with the passing pregnancy, and more amenable to treatment by laxatives and horizontal rest.

In lying-in women abrasions of the nymphæ or nearer the orifice of the urethra, giving rise to irritable bladder, are important, not so much on their own account, as because they are liable to mislead the practitioner into thinking that something is wrong with the bladder. They often cause dyspareunia, and they are easily cured.

I shall conclude—regretting that I have not time to enter upon diseases of pregnancy and the puerperal state—by a few words upon the peculiar inflammations of old age. These depend generally upon vascular weakness, not rarely on some morbid vaso-motor condition. They are generally clubbed together under the name of their great symptom pruritus—itching—which may vary from being a most trivial irritation to earning the name of agony; producing at times so much suffering as to put a woman beside herself, generally at night after going to bed. The disease is characterised by a great variety of conditions. Almost invariably you have hypertrophy of the labia majora and minora, as well as of the carunculæ myrtiformes at the orifice of the vagina; and the disease also frequently affects the vagina itself. The skin is red and may present a parchment-like appearance, produced apparently by frictions which the woman makes to relieve herself. This parchment is seen on the inner surfaces of the labia. Frequently there is a scalincss of the surface, which is more like ichthyosis than psoriasis, and is probably simply the result of the erythema or dermatitis. With this disease there is often intertrigo of the groins and hips. The disease is often produced by discharges from the vagina. Acute attacks often result from diabetes, which acts in two ways—first, by the sugared urine irritating the skin; and second, by the diabetic constitution producing acute (not suppurative) inflammation, with enormous hypertrophy, and often with herpetic eruption. Herpes accompanies diabetcs, not merely on the inflamed labia, but also elsewhere. You may have a regular herpes elsewhere, and a herpes-like eruption on the labia as well, or none on the labia. The herpes shows that the disease is not a mere local one, but a nervous disorder. In three of the last cases of diabetes in women that I have seen, there was, besides inflamed labia and pruritus, in one, herpes of the right forehead; in another, of the left side of the face and mouth, including the tongue; and in the third there was the ordinary zonal herpes of the right side of the chest.

Slighter inflammations of the pudenda in old age differ from the vulvitis of children in this—that they are produced by dirt.

The chronic inflammations of old age are very difficult of treatment. They may be alleviated, and are but seldom completely cured; and in this respect they differ from the inflammatory affections of previous ages. Of course, if you find any cause, such as diabetes, or vaginal discharge, or constipation, or piles, you pay attention to that. If the disease is merely local, you are satisfied with local treatment; and this may be varied in many ways. This variety is of itself an evidence that no method of treatment is often effectual. When there is a disease for which there are many cures, you may be sure that all of them are of limited value or limited extent of utility. The applications used are either lotions, powders, or ointments, made with fat or vaseline or glycerine. Lotions are the most useful, and none better than the common one of oxide of zinc and highly diluted hydrocyanic acid; another much used is the old-fashioned black wash. Lotions with decoction of poppy-heads or muriate of morphia are also used; and you may also try belladonna in them. Sometimes a fomentation of tobacco infusion with borax is comforting. Painting with weak solution of nitrate of silver is sometimes valuable. Dabbing with concentrated solution of boracic acid is worth mentioning. The ointments most used are those of boracic acid, bismuth, zinc, and hydrocyanic acid. Powders of starch, chalk, and bismuth are sometimes useful.

Great perseverance in the treatment of cases of this kind often rewards the practitioner; but another kind of persevering in well-doing on the part of the patient is essential, and forms an important part in the instructions of the medical man—that is, not to scratch or rub. To abstain is almost impossible, yet a courageous abstinence will be rewarded. If scratching is persisted in, the disease is made inveterate, incurable; or the repeated irritation may lead to what has been called oozing tumour of the labium, and to malignant epitheliomatous growth.

ORIGINAL COMMUNICATIONS.

YAWS: WHAT ARE ITS ATTRIBUTES?

By GAVIN MILROY, M.D., F.R.C.P. Lond.

I PROPOSE to answer but very briefly Dr. Nicholls' strong protest against my letter in the journal of October 11, and to add at the same time a few new observations which may possibly serve to excite some further interest in a subject—viz., the history and treatment of the yaws (frambœsia)—that has hitherto attracted too little attention in the profession, not only in this country, but also among many of our colonial brethren.

Knowing well with what zeal and ability Dr. Nicholls has been, of recent years, pursuing the difficult work which he has undertaken in endeavouring to extirpate an obstinate local malady which has long caused to his colony so much trouble and expense, I have always been desirous to promote his arduous efforts by offering some suggestions respecting what seemed to me might be obstacles to his success. No one can be more conscious than myself how extremely imperfect is my *accurate knowledge* of the disease in question, and my sole motive in throwing out such hints for consideration has been the hope of advancing the truth in respect of a nosological problem in the solution of which I feel much concern.

1. Surely Dr. Nicholls has misinterpreted and mistaken my views as to what part contagion may play in the origination and spread of yaws. Nowhere have I denied or rejected its possible operation, nor have I propounded any theory of non-contagion. I have only stated, *first*, that the disease does not uniformly or on all occasions exhibit any very marked or decided contagious property; and, *secondly*, that the idea of contagion being the sole factor in the causation of the disease is still very problematical, or, in other words, is "an unverified hypothesis." Is it not a too frequently besetting sin of our profession, in dealing with the confessedly difficult subject of the etiology of disease, the tendency to imagine that the genesis and development of many maladies must be due to the operation of one single or individual cause?

With respect to the *first* of the above propositions, the experience of Jamaica deserves to be known. For many years past, patients affected with yaws have been received into and associated with lepers in the same asylum; and, indeed, besides these two forms of disease, cases of elephantiasis and other maladies are not unfrequently admitted into the institution. For example, in the latest annual report for 1879, we read, among the inmates in the Leper Asylum, of two cases of "chronic eczema," one of "anæmia," one of "scrofula," and "two children free from disease." No instance of the communication of the yaws to other inmates of the institution has, so far as I know, ever been recorded. If I am wrong, Dr. Bowerbank—to whom Dr. Nicholls

justly refers as one of the chief authorities in the present day on this disease, and who, after forty years' active practice in Jamaica, is now resident in London—can correct me, and I would therefore strongly appeal to him to give the profession the benefit of his knowledge upon this point in the history of the disease in that important colony.

In regard of the *second* of the two propositions, I have solicited Dr. Crane, the Surgeon-General of Trinidad, to have the question thoroughly investigated there, and I have every reason to believe that this will be done under very favourable conditions. Moreover, quite recently an opportunity has occurred to me of urging upon the Government of Demerara the importance of a like inquiry being instituted in that colony, where yaws is known to prevail in various districts.

2. Most gratifying is the "amended dietary" in the Central Yaws Hospital of Dominica (for a copy of which I am indebted to the Colonial Office), that has replaced the former one which was so much objected to. The use of *salt* pork in the preparation of the soup has been quite discontinued, and *fresh* meat or *fresh* fish is substituted for dinner every day in the week. The *salt* fish, which was formerly the staple article of animal food, is now, in diminished quantity, given only in the early forenoon, or late breakfast, together with bread and chocolate.

The number and frequency of the meals have also been much improved, so that now the scale of diet has been brought nearly to the standard recommended in the following extracts from West India writers:—

"In healthy subjects, when the eruption has come out copiously, no medicine whatever is necessary. Additional clothing, and diet of a fresh, nutritious quality, ought to be afforded them, particularly to children."(a)

"Diet to consist of animal food in substance or in soup, and a moderate allowance of wine, porter, or spirits and water, unless the patient be an infant, in which case the mother ought to be well supported by giving her good diet. Generous diet is a point of the highest importance, in my opinion, and no great advantage can be derived from medicine without it."(b)

"The diet should be mild and nutritious, and everything salted, or smoked, or difficult of digestion ought to be abstained from. The warm bath is a useful adjuvant."(c)

3. Deeply interesting to geographical pathology is the fact recently discovered, that yaws is a disease not limited, as formerly supposed, to the African coast and the West Indies, but that, as it has been found of late to exist both in Fiji Island and in Ceylon, it seems very probable that it prevails far more widely than is at present imagined. The description of the "Coko" disease by Dr. Macgregor, the chief medical officer of the colony of Fiji, leaves no doubt as to the nature of the malady described:—

"From the surface of some of the tubercles or sores a slight discharge of purulent matter takes place, mixed up with serum and disintegrated epidermis, forming a thin covering of a creamy colour over the summit of the tubercle. This crust is easily removed, usually coming off entire like a cap from the tubercle; beneath it there is a small quantity of purulent matter, through which protrude what appear to be papillæ of the true skin. They are very much enlarged, standing up separately, sometimes one-eighth of an inch in length, the brightness of their hue appearing a strong contrast to the creamy fluid bathing their almost contiguous bases."(d)

As to the Ceylon disease, the following extract from the last report of Dr. Kynsey, the principal medical officer of the island, will be read with interest:—

"With reference to the remarks made by me last year on the questions of the 'raspberry-like fungus,' and my inability to recognise it, I have since seen several well-marked examples of the excrescence, and I consider the comparison of Dr. Imray, of Dominica, that it resembles 'a piece of coarse cotton wick dipped into a dirty yellow fluid and stuck in the skin in a dirty, scabby, brownish setting,' although not so elegant as the strawberry or raspberry, is more accurate. I will not anticipate the account of the disease which will appear in the report, but I think I will be in a position to describe and to illustrate as many varieties as Dr. Milroy has named in his Report on Yaws, even to the crab yaw, which is represented in Ceylon by a form of parangi of the foot called *dumas*."(e)

Richmond, S.W.

(a) "A Treatise on the Diseases of Negroes," page 92. By James Thomson, M.D. 1820.

(b) Article on "Yaws" in the *Jamaica Physical Journal* for November and December, 1836. Kingston, 1836.

(c) "Observations on Yaws, etc." By James Maxwell, M.D. 1839.

(d) *Transactions of the Epidemiological Society*, vol. iv., part 1, page 55. 1879.

(e) Report accompanying the "Returns of the Civil Hospitals, Lunatic and Leper Asylums of Ceylon." Colombo, 1879.

NOTES ON TETANUS;

WITH REMARKS ON THE EFFICACY OF CANNABIS INDICA WHEN ADMINISTERED THROUGH THE LUNGS.

By Dr. JOHN C. LUCAS, F.R.C.S. Edin.,
Her Majesty's Bombay Medical Service.

TETANUS is by no means a rare affection in India; but there are, I believe, no reliable statistical or other data published, to show whether it preponderates more there than in temperate climes, or the reverse, and what those meteorological and other conditions are which tend to give rise to a difference (if any) in its relative frequency and mortality. Our knowledge on these points of vast and paramount importance must, in a measure, remain in abeyance until more light is thrown to dispel the almost complete darkness in which the subject of the nature of the malady is enveloped. No substantial basis for rational treatment, to be successful as a general rule, can be expected to be arrived at until we come to know more of its etiology and morbid anatomy. Theories after theories (including the septic) have from time to time been propounded; and drugs after drugs have been proposed and tried: of the latter the Indian hemp and Calabar bean (both by mouth and hypodermically), jaborandi, and in fact almost every anti-spasmodic, narcotic, and sedative in the Pharmacopœia, may be said to have had its day. Since about ten years back, on the introduction of hydrate of chloral, it became the fashion to prescribe that favourite and valuable medicinal agent, and it did not take it long to establish a high reputation, which it up to this day holds. In the same manner the nitrite of amyl, but perhaps to a lesser degree, has advocates. Surgically, likewise, various plans have been from time to time put forth and practised, from the division of the suspected nerve to the amputation of a limb or portion of a limb where a wound existed. In these lines of treatment, like those of therapeutics, neither success nor failure has been so constant and invariable as to give general acceptance to or to condemn the remedial measure producing the issue. Cases have recovered and died just as often when a nerve has been divided or an amputation performed as when nothing of the sort had been done. If we come to analyse the statistics of one surgeon, and compare them with those of another, one of whom divides the nerve he suspects, while the other amputates, we shall find that in the main there is probably little or no appreciable difference in the results. To the impartial observer, who has no pet theory of his own, the task of analysis of cases will not in reality prove so easy as it may at first sight appear to be. We have to bear in mind that the cases which come under observation vary in respect to the degrees in severity, personal constitution, previous hygienic and other surroundings, age, sex, etc.

The subject of nerve-stretching has of recent years engaged the attention of the profession; and we are told by the *Lancet* (1878, vol. ii., page 244) that "nerve-stretching for any disease whatever (first performed by Billroth) is as yet a new operation, and in tetanus it has, so far as we know, been tried only in two recorded cases before those of Dr. Watson, though its employment had been previously advocated by Mr. Milner (*St. Bartholomew's Hospital Reports*, vol. xi., page 287), and by Mr. Callender (*Lancet*, April 22, 1876)." Previous to that Callender had published a clinical lecture, delivered at St. Bartholomew's Hospital, in the *Lancet* of 1875 (vol. i., page 883). Prior to that again, Nussbaum wrote on the subject in 1872 (*Lancet*, vol. ii., page 783).

But I think it is to Dr. Ebenezer Watson, of Glasgow, that credit is due for the introduction into modern practice of this novel mode of treatment. This, although based

upon very rational principles, cannot be applied to all cases, nor is nerve-stretching itself without its own risks, especially when important parts have to be disturbed. He writes:—"The effects of nerve-stretching upon the nerve-cords or their centres are not at present known with precision; but most experimental physiologists, as well as practical surgeons, are quite aware that nerves do bear considerable stretching without finally losing their characteristic properties. Attention was, I think, first attracted to this subject, as a means of treating certain painful and spasmodic nervous affections, by Nussbaum. Mr. Callender and others have recorded their experience of the operation in cases of neuralgia, epilepsy, etc.; but, except a bare notice in the *British Medical Journal* for 1876, that M. Verneuil had had a case of tetanus at La Pitié which recovered after nerve-stretching, I have not been able to find any recorded case of tetanus treated in this way. Yet I am sure that most surgeons will agree with me that the suggestion thus made is at all events worthy of a trial. I certainly have much confidence still in the Calabar bean, which, I believe, I was the first to recommend for the treatment of this terrible disease; but the operation of nerve-stretching does not prevent the use, while it may possibly assist the action of the drug. Hence, when the following cases occurred in my hospital practice, I thought I was bound to give my patients the benefit of the proposed operation; and I now feel equally bound to make the result public without delay" (*Lancet*, 1876, vol. ii., page 229). But, as before stated, his treatment can only be applied to cases where an obvious causal condition is existent. In one of the two cases published by him in the paper quoted above, the tip of the index finger had been "crushed off, and the wound was suppurating, but not unhealthy . . .;" on "the eleventh (day) from the injury to the finger symptoms of tetanus commenced in the usual insidious way." In that case Dr. Watson stretched the median, ulnar, and musculo-spiral nerves. The case terminated fatally from asthenia, but no post-mortem was made, as it was refused. In his next cases also there was an evident traumatic cause. "A lorry-wheel had passed over the left hand, and caused a ragged wound across the palm of the hand, fracturing the two external metacarpal bones." Eight days after the accident tetanus set in; next day it became more pronounced. Dr. Watson did the same as in the other case, and in this also there was a fatal termination, but this time from apnœa. No post-mortem was allowed.

I now propose to say a few words with reference to the open question whether tetanus is ever an idiopathic disorder. I take the term "idiopathic" in its widest significance. For my own part, I am inclined to side in the belief of those observers who hold that it is (almost) entirely a surgical disease. A few cases which came under my own care, and several under that of others which I saw or have read about, led me to believe that in all cases there is a traumatic cause either on the exterior of the body or within it; and that in the latter class of cases, where we cannot find it, this may be ascribed as the reason of fostering the view that tetanus is sometimes an idiopathic disease, *i.e.*, occurring without any wound on the surface of the body. The one or two cases which I describe here are examples that go to demonstrate, what I believe to be a fact, that not unfrequently the existence of the traumatic cause may be overlooked, and the case put down as of idiopathic origin. The labour of a non-commissioned officer's wife was allowed to be protracted to sixty-three hours, if not longer, the friends entrusting the case to the supposed skill of an ignorant native nurse (dhai). When the case was seen by me, opisthotonus was marked; the clonic spasms with risus sardonicus existed, irrespective of the uterine contractions. The case on digital examination was found to be one of face-presentation; the cervix uteri (as afterwards seen) was ulcerated, pelvis small, and the soft parts (both maternal and fœtal) much swollen and enlarged. Chloroform was administered (both for the tetanus and as an anæsthetic to facilitate delivery), and podalic version was first attempted. In doing this, on finding that the pelvis was too small to admit my hand, I introduced and guided the right hand of the nurse (whose hands were as small as those of a girl five or six years old) with my right, and with my left on the abdomen I tried to turn, but failed. The child being dead, and knowing that if I delayed, even a quarter of an hour, I should lose the patient, I performed embryulcia, and effected delivery. The tetanic spasms being still bad, I introduced my sound,(a) and through it injected into the uterus a solution containing the hydrate of chloral and the perchloride of iron.(b) The instrument was left in, and fastened through the diaper.

Long before the disappearance of the lochia the tetanic spasms had subsided, and the patient ultimately, though after a protracted convalescence, made a splendid recovery. Another case, which I purpose to cite, was in a newly-born child of a Parsee gentleman. I was summoned to attend its mother in labour. My notes also say that "delivery had to be effected with Simpson's long forceps," and that on my third visit the infant was noticed to be tetanic. After it was born the child received no injury, nor was it in any way exposed to chill or other ordinary (supposed) causes of the disease. The cause became obvious on removing a piece of cloth which was tied round the head: a largish cephal-hæmatoma and the depressions caused by the pressure of the forceps were now observed. Perhaps I had pressed a little too hard in bringing the head rapidly down through the brim. The division of the tumour by a "free crucial incision" was the treatment adopted, with the satisfactory result that at my visit the following morning the child was free from all spasm, and was able to take its mother's breast, which it could not before.

These two cases are illustrative examples of how the real traumatic cause may escape notice.

I now propose to proceed to describe briefly a new plan of treatment with the Indian hemp.(c) The drug has for forty years or more been largely used in the treatment of tetanus, but generally by mouth, and in a few instances subcutaneously, so far as I am aware.

As asphyxia is in a large proportion of cases the *causa mortis*, by the rigid contraction of the respiratory muscles, it is logical to assert that measures directed to the aversion of this, if successful, would be valuable remedial auxiliaries. And, moreover, with *à priori* reasoning, if our endeavours are primarily directed to the parts concerned in causing death from asphyxia, the effect would not only be prevented, but it would be a great step towards success. It is with this view that I here beg to invite attention to the efficacy of all those means by which impediment to the process of respiration, and thereby to the oxygenation of the blood, is prevented. Pure air (without too much breeze or draught) should be allowed to the tetanic patient, conjoined with quiet—perfect quiet,—which in a hospital can only be secured by isolation.

It will have been observed by those who have tried it, that the effects of chloroform when inhaled are much more marked and lasting than when otherwise administered. I have tried the undermentioned plan in some cases which came under my observation, and had every reason to be satisfied with its utility, and it is with a conviction of its general applicability that I commend it to the notice of my professional brethren. I now leave it to them to pronounce their independent opinions on its merits, and what the contra-indications, if any there are, against its adoption. The attendant or friend who nurses the patient is directed to have a hookah or Indian hobble-gobble, charged with the dried leaves of *Cannabis Indica*, ready, with or without double or quadruple its bulk of ordinary tobacco. This pipe being all ready and close at hand, directly the spasms begin the patient is made to smoke this until they subside (which they really do soon), and he or she looks drowsy and inclined to sleep. The patient is then left alone, and allowed to go off and remain in this sort of forced slumber. To let the patient sleep the utmost quiet and stillness should be enjoined and strictly enforced in or about the room or ward. The attending person in this interval gets the pipe again ready for immediate use when the patient wakes, also any nourishment, etc. Having got these ready at hand, the former should vigilantly watch the latter, who on waking with a spasm should be asked to take a few whiffs until it passes off, and then, after being made to take what nourishment may have been ordered, is again made to smoke until the narcotism is produced. In this way the patient is to be kept continuously, day and night, under its influence. On

(a) An instrument I had caused to be made: it is gum-elastic, hollow like a bougie, but has the shape and length of a uterine sound.

(b) There was profuse hæmorrhage: for this and as an antiseptic precaution.

(c) The credit of originality is, I think, due to Mr. Khastagir, Assistant-Surgeon, who has recorded five cases treated by himself, all of which recovered (*Indian Medical Gazette*, 1878, vol. xiii., pp. 210-11).

no account is he to be disturbed to take his food, or for any other reason, for which opportunity is to be taken when he awakes of his own accord, or from spasm. Alcohol may or may not be prescribed, according to indications. In the cases of very young children the plan of course cannot be carried out. The advantages which may be claimed in favour of this mode of treatment are—(1) the spasms are cut short; (2) they reappear gradually at longer and longer intervals; (3) they gradually become, not only less frequent, but less severe: this (4) saves the patient's vital powers of exhaustion, and thus, by prolonging life and preventing death, life which otherwise would have succumbed may eventually be saved.

It may be said here that an ordinary pipe with a large tube and large bowl will answer equally well; or that the hemp may be given in the form of cigarettes mixed with a little tobacco, and that each dose of the smoke may be regulated from eight to thirty grains, commencing with the smaller dose and gradually increasing it as more tolerance is established.

I have the belief that the drug opium would also be of far greater avail when exhibited in this way. It has been used, but by mouth, both as a remedial measure and for its alleged prophylactic virtues. Opium may also be employed in combination with hemp. It would be interesting to know if tetanus is infrequent in opium-eaters.

India.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

GUY'S HOSPITAL.

A GROUP OF CASES OF INJURIES TO THE HEAD.

(Under the care of Mr. BRYANT.)

Injury to Head (Fractured Base?)—Dysphagia and Modification of Voice—Paralysis of Right Hypoglossal Nerve and of Glosso-pharyngeal—Relieved.

[Reported by Mr. ADENEY.]

EDWARD M., aged fifty-six, was admitted into Job ward on December 8, 1879. He had been under Mr. Bryant's care six years ago for traumatic aneurism of the left radial artery, which was successfully treated by ligaturing the vessel. On December 4 at 2 p.m. a heavy piece of timber fell upon his head, striking him chiefly just above the left frontal eminence, and knocking him down, but he did not become insensible. He tried to take some brandy, but could not swallow. He was taken home in a cab; and in the evening tried to swallow some beef-tea, but was obliged to cough it out. He had no cough before the accident, but one commenced almost directly afterwards, and his voice became hoarse and uncertain. He was under a medical man, but as he got no better he came to the hospital on the fourth day after the accident. His bowels have been open twice since the accident, and he passes his water without difficulty. On admission, despite his long fast, patient looks well, but his expression is somewhat dull. There is an irregular scalp wound, now scabbed over, extending from the left frontal eminence to the anterior fontanelle. He complains of great pain, which he refers chiefly to the occipital region. He can only rotate his head very slightly, on account of the pain which this motion produces, but the movements of flexion and extension are more free. Pain is produced by pressing down the head upon the vertebra and by moving the head forcibly. Intense agony is produced by pressing with the finger behind the mastoid process on either side; and a similar pain, but of less degree, is obtained below the occiput. There is no discharge from either ear or nose, and the patient does not appear deaf on either side. On looking at his face there seems to be some displacement to the right side, but the patient says that his nose has long been deflected to the right. When he closes his eyes the orbiculares seem to act normally. When patient protrudes his tongue it is seen that the mass of it is deflected very slightly to the right, but there is a sharp deflexion of the apex to the right, the flexure being about 1″ from the tip. When told to protrude the tongue to either side it is seen that he can move it more forcibly to the left, producing a wrinkle in this cheek, which is not present in the right under the same circumstances. On the right half of the dorsum of the tongue is a white secretion with remains of food. When he protrudes and hardens his tongue a marked difference between the two sides is felt. The right side is quite flaccid, and will yield to the finger, whilst the left is normally resistant. This difference exists far back in the floor of the mouth, over the extrinsic lingual muscles. On the dorsum the hardness is felt to extend to ⅛″ to the right side of the middle line. The dorsum of the tongue appears to be normally sensitive, but there is some anæsthesia of its sides. There is anæsthesia of the posterior walls of the pharynx, the patient hardly knowing when it is touched with a probe. There is no projection of the axis forward into the posterior wall. The soft palate, with the uvula, is quite insensitive, no reflex action being produced when it is touched. It feels flabby—equally so on both sides. Patient has a severe cough, constantly expectorating frothy mucus; it is not a good explosive cough. There is no bubbling at the posterior base of the lung, and no dulness on percussion. Heart-sounds normal. Pulse 60; temperature 98°. No fracture of hyoid, thyroid, clavicle, or sternum. No pain produced by pressure on dorsal spine. No anæsthesia of neck.

December 9.—In much less pain, and able to swallow some milk when his tongue and chin are drawn forward.

10th.—Less pain. No reflex action of soft palate; paralysis of the right half of the tongue is persistent.

12th.—Headache less localised to occipital region. Rotation causes pain; complains of pain behind ear when he coughs. Reflex action in soft palate returning.

13th.—Swallows milk freely.

15th.—Tongue the same, but other symptoms disappearing.

17th.—Tried to eat some bread and milk, but failed.

18th.—Soft palate quite insensitive on both sides, and the uvula is drawn to the left.

22nd.—Right half of tongue covered with fur and the remains of food. Left half cleaner.

Discharged himself on December 29.

The tip of the tongue was deflected to the right as much as ever, but both halves were equally firm. No anæsthesia in soft palate, but it does not respond by reflex action to stimulation. Can swallow fluids quite comfortably. No pain on moving head, except on extreme rotation.

January 12.—Tongue now nearly natural, one side being as firm as the other when the organ is forcibly protruded. Voice still hoarse, and some cough present. Can take food better.

It seems very probable that in this case there was a fracture of the base of the skull involving the eighth and ninth pairs of nerves as they escape through their foramina.

Injury to Head—Concussion—Strange Mental Condition—Well.

[Reported by Mr. GRIFFITHS.]

Matthew D., aged twenty-four, was admitted into accident ward on December 3, 1879, under Mr. Bryant's care, a beam having fallen on patient, striking him on the back of the head. He was rendered insensible, remained so for about three-quarters of an hour, and on recovering consciousness complained of headache. On admission there is a bruise on the occiput, and the patient complains of headache and loss of memory. There was no sickness, or discharge from either ears or nose, no ecchymosis or paralysis. On December 4 and 5 patient's mental condition was very odd. He was apparently lost to all external impressions, and stared about in a daft, dazed way. He was thought by some to be malingering, but was not. These symptoms passed off. On the 5th, after a deep sleep, he awoke about midday without remembering anything that had occurred since he went to work on the morning of the 3rd, and began to make inquiries from the next patient as to how he came in the hospital, etc. Pulse irregular up to the 7th. On the 6th he could speak rationally and reasonably.

Ice-bags were applied on admission, and iced milk given for food.

December 20.—Patient now only complains of weakness, and has no headache or any abnormal symptoms.

31st.—Discharged convalescent.

Concussion, followed by Fit.

[Reported by Mr. FARAKER.]

John B., aged ten, was admitted into accident ward on July 18, 1879, under Mr. Bryant's care. He had fallen from a

scaffolding, thirty feet high, into a tree, and from thence on to a heap of bricks, at Chiswick. A local practitioner examined him, but found nothing wrong. He was taken home, where he "had a fit," which lasted a few minutes, during which he was sick, and he struggled somewhat. On admission there is an incised wound, partly separating one ear from the skull. There is apparently no fracture, and no paralysis; the pupils are equal.

July 19.—Patient has a slight headache; otherwise well. Has not been sick since admission. Milk diet.

21.—Feels quite well; has no pain in head nor giddiness, and sleeps well.

27.—Apparently quite well. Ordinary diet.

Injury to Head—Coma, followed by Fit—Well.

[Reported by Mr. Faraker.]

Joseph Q., aged nineteen, was admitted into accident ward on July 22, 1879, under Mr. Bryant's care. Patient was knocked down by a cab, and the horse fell upon him. He has a scratch on the right ear, and there is blood in the external meatus. No fracture can be felt about the head. No paralysis. He is very sleepy: does not know where he is. Pupils equal and sensitive to light, but rather sluggish. He had an epileptic fit soon after admission. (He said while in the hospital that he had never had a fit before.) Ice-bags applied to head.

July 23.—Constantly sleeping; cannot be roused.

24th.—Not having micturated, a catheter was passed, and thirty-nine ounces of urine drawn off. Bowels not opened. Cannot be made to open his mouth. A No. 9 catheter was passed through the nose into the œsophagus, and three drops of croton oil and half a pint of milk introduced.

25th.—Still sleeping; can be roused to answer question. Croton oil worked well.

26th.—Brighter, but still drowsy. Catheter still passed. Had a natural motion.

27th.—Still stupid and heavy, but greatly improved. No fits since the one after his admission. Passes water naturally. Has a slight frontal headache.

28th.—Quite awake, and answers questions fairly well.

30th.—Improving. Milk alone allowed.

August 6.—Fish diet allowed.

13th.—Walks up and down ward for a few minutes. Was a little giddy at first, but is not at all so to-day.

18th.—Walks somewhat in a ziz-zag manner.

20th.—Walk improved. No giddiness. Appetite good. Sleeps well. He left the hospital convalescent soon after this.

Fractured Base of Skull—Laceration of Frontal Lobes—Meningitis—Localised Spasm—Death five days one hour after accident.

[Reported by Mr. Lister.]

Timothy S., aged twenty-six, was admitted into accident ward on November 10, 1879, under Mr. Bryant's care. At 11.30 p.m. on November 8 patient was knocked down by a blow under the chin, which caused him to fall backwards, striking his head on the ground. He became insensible, and bled from the nose and mouth. He was taken home, and a surgeon prescribed some medicine. He continued quite insensible, and never spoke after the blow. About eight or nine hours after the injury he was very sick, and vomited a deal of blood. After that he remained quiet until November 10, when he became very violent and delirious, and was brought to the hospital.

On admission he has a great prominence on the back of the head, and a peculiar twitching of the facial muscles. He squints, and utters the word "mother" at intervals. He has twitching of the left arm. On leaving the hands loose and touching his nose he pushes away with his hands, using most force with the left. There is no facial paralysis. Patient's attention cannot be arrested. The eyes are generally shut. The left side of the face draws up with the corner of the mouth, as if from a tickling sensation in the nose—never to the right side. This is done several times in the minute. The left shoulder is less frequently elevated; there is, moreover, extension of the elbow due to contraction of the triceps, the flexors not moving. There is no correspondence between this and the face. The leg does not move. There is no paralysis, as he moves, on irritation, all the limbs. Temperature, morning 102·5°, evening 102·8°.

November 11.—Not so violent. Pupils not dilated. Ice-bags applied to the head, and iced milk given.

12th.—Appears to pay attention when spoken to, but does not answer. Passes water involuntarily. There is blood in the nose. 1 p.m.: Less frequent twitching. Has slept and now does so occasionally. He calls "Ba, ba, ba," for a long time, and then "Mother" many times in succession. The right naso-labial line is less defined than the left. On irritation the same movements occur.

13th.—Patient has answered when spoken to, and shows signs of returning consciousness. His arm and face twitch less. His utterances take the form of songs of a monotonous description. His urine contains no albumen, but is full of urea. On bringing a finger in contact with his lips he at once attempts to seize the finger, and his lips move as if to swallow. The tongue can then be guided to either side of the mouth. Swallows well, and chews ice with vigour, and occasionally whistles. Bites his lips. Towards evening he fixed his eyes on others for a moment. There was less frequent twitching. No anæsthesia, nor has there been any. He has been very noisy all night, sleeping at 6 a.m. The twitching has now entirely ceased in the arm, but is occasional in the face. On irritation the muscles on the left side of the face are always drawn up, but on more severe irritation those on the right can also be made to act, but always less powerfully than those on the left side. He uses the left hand voluntarily, but never the right unless the left is held, and then there is distinctly less power on that side. The right side of the face also looks a little flat. Temperature, morning 100·6°, evening 103·8°. The patient gradually became worse without developing any fresh symptoms, remaining quiet during the day and up to 12.40 a.m. on 14th, and then died.

Post-mortem Examination.—The fracture commenced in the protuberance of the occipital bone, and then, running forward, split in two directions to the right of the foramen magnum, one continuing to the foramen, and the other extending across the lateral sinus to the jugular foramen; then through the petrous portion of the temporal, extending to the auditory meatus, and ending in the foramen ovale. The end of the petrous portion was loose and easily separated, so that the facial nerve must have been injured at least, but, as the nerve was divided in removing the bone, how far remains doubtful. The tympanic cavities were uninjured. Both frontal lobes were much bruised on the under surface, especially the right, in which there was a ragged laceration. There was recent suppuration in the meninges, especially at the base, spreading thence to the convexity. There was also a thin layer of blood in the arachnoid cavity all over the surface, especially on the right side; pus also on the superior surface of the cerebellum. The convolutions corresponding with the centres for the face and arm were found uninjured, but might have been compressed by blood.

(*To be continued.*)

Expressive Chemical Names.—A correspondent of the *New York Med. Record* (January 1) quotes from the publication of the *Berliner Chemische Gesellschaft* a note on the production of tetramethyldiamidodiphenylmethan and naphthyldimethylamidophenylsulphion. If the latter be heated with nitric acid, pertanitro-dimethylanilin and nitro-naphthalinesulphite are produced.

Microscopical Examination of the Skin in Erysipelas.—At a meeting of the New York Pathological Society, Dr. Amidon gave an account of an examination of the skin which he had made in a case of violent facial erysipelas. Desquamation of the epidermis, the rete mucosum everywhere thin and in places separated from the subjacent papillæ and disintegrated; the hair follicles, sebaceous and sudoriparous glands, the seat of abnormally large collections of young epithelial cells; many of the large and small bloodvessels are thrombosed, and all along their course a moderate, and in spots an excessive, migration of new cells has taken place. The subcutaneous cellular tissue everywhere contains an increased number of nuclei, especially marked in the adipose tissue. Here and there disorganised sloughy masses are met with in the subcutaneous areolar tissue, almost miliary in size. The subjacent muscle (platysma) is the seat of a waxy change.—*New York Med. Record*, December 20.

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Medical Times and Gazette.

SATURDAY, FEBRUARY 21, 1880.

THE MEDICAL ACT AMENDMENT BILLS.

All the Bills for the amendment of the Medical Act (1858) have now been read a second time, and are ready to be again referred to a Select Committee. The action of the Government and of private members in re-introducing and promoting their various Medical Bills so early in the present session may be accepted as evidence that the Government are determined to proceed with, and to complete as speedily as possible, the medical legislation which was postponed from last session. The next step will, of course, be the re-appointment of the Select Committee, with such modifications in its constitution as seem to be required. Thus the death of Dr. O'Leary leaves an absolute vacancy; and it has been suggested, as we have before stated, that some of the English Universities, interested as they are in medical legislation, would be justly represented as well as the Scotch and Irish. A considerable part of the evidence which the Committee has taken, and which it has to consider, consists of statements reflecting seriously upon the constitution and capacity of the General Medical Council; and we stated a fortnight ago that the Crown members of the Council had taken occasion to represent to the Government the unsatisfactory position in which they feel that they, in common with the rest of the Council, are placed by the existence of such statements, and to request the Government to proceed at once with the inquiry, so that the Committee may present its report as soon as possible. Altogether, there is every reason why the medical legislation, which has been so long in contemplation, should be completed without any avoidable delay. We have all along contended that there are but few points that have to be immediately secured in the new Act, the most important being the obligation of fulness and completeness of the entrance qualification for all persons joining the medical profession in the three divisions of the kingdom. The principle of "direct representation" might very well give way to matters of more real importance and urgent necessity. But various rumours are afloat as to the proposed reform of the constitution of the Medical Council. Thus, it has been suggested, we understand, that the Council might be advantageously reconstituted in the following manner:—A Committee of Reference, such as has been appointed in England, and would be required to be appointed in Scotland and Ireland in the event of Conjoint Boards being established there, should be empowered to nominate a certain number of members—say four for England, two for Scotland, and two for Ireland,—with whom there would be associated six or eight members nominated by the Crown, to constitute a General Medical Council, which should discharge the duties of superintending medical education, examination, and registration. It has also been suggested that the members of the General Council, instead of being selected by the Committees of Reference, should be elected by the Branch Councils of the three divisions of the kingdom. It would then remain an open question how far the Branch Councils should be elected by popular professional suffrage. The Central Council, which would thus be constituted by the nominees of those most qualified to judge of their fitness, would no doubt be adequate to perform its duties more efficiently than the present Council, which is greatly fettered in its work by its own numbers and by the diversity of interests which it represents. All such rumours are, however, at present too crude and vague to call for any serious consideration or comment.

The objections to all such schemes lie on the surface. The complaints now made with regard to the Medical Council are chiefly these two: that it is too large and unwieldy for its duties, and that it does not properly represent the body of the profession. With regard to the former objection, that might be easily got rid of by limiting the numbers to be returned by England, Scotland, and Ireland respectively. The second is equally avoidable by extending the constituencies to the general body of graduates or licentiates. Neither seems a very material alteration, and the two would satisfy most reasonable men.

THE MANCHESTER CHILDREN'S HOSPITAL CASE.

Elsewhere in our columns will be found two letters, from Dr. Borchardt and Mr. T. Jones, with regard to the Pendlebury Children's Hospital case. We have also received a communication from Dr. Ashby on the same subject, with the substance of which we shall at once deal. When commenting on the deplorable events which culminated in the resignation of Dr. Humphreys, we quoted from a letter written by Dr. Borchardt to the Editor of the *British Medical Journal*, in which Mr. Jones was described as House-Surgeon to the Pendlebury Hospital. This we are now assured was a misprint. Mr. Jones is not, and never has been, House-Surgeon, but has been Surgeon to the institution for the last six years. Thus all our comment—if such it could be called—with regard to Mr. Jones is at once disposed of, and we need hardly say would never have been made had we not thus been led into error.

Next, as regards Dr. Ashby, we made reference to his assuming the chief position in the Hospital when he had only been four months attached to it. This, we are informed, was quite in accordance with Dr. Humphreys' views, who indeed seconded the nomination of Dr. Ashby to this post. How far this act was a wise one, it is not for us to say, but it certainly clears Dr. Ashby from all reproach as regards what seemed to be the usurpation of a post which of right belonged to another.

We are sorry that we fell into these errors, and we are, as all right-feeling men should be, sorry for unintentionally

having inflicted unmerited pain, but the fault was not ours, and the errors were such as were likely to be fallen into by others as well as ourselves, who had only like sources of information available. The publicity, therefore, of this contradiction will effectually remove all misapprehension from men's minds, whilst at the same time it will show that our remarks have been grounded entirely on what has been laid before the public, unaffected and unbiased by any private feeling or consideration on our part.

Next, as regards Dr. Borchardt's letter: in it he accuses us of "firing a volley of invectives against him without any good grounds for doing so." We think that anyone who reads the article in question with unbiased mind will see that "invective" in any shape or form is absent from it. What we had to say we tried to say as calmly and as quietly as possible; whilst the epithet "disingenuous," to which Dr. Borchardt specially objects, applies not to Dr. Borchardt himself, but to the defence made by the governors and to the letter addressed by Dr. Borchardt to the Editor of the *British Medical Journal*. Dr. Borchardt may rest assured that we have nothing to say with regard to this case or those concerned in it beyond what the facts seem to warrant; and we should all think it hard were any action of any man in any given set of circumstances applied to the whole conduct of his life, past, present, or to come.

Again, Dr. Borchardt writes that he does not understand us when we say that he is at once a governor and something more. The riddle is not difficult of solution. If Dr. Borchardt not only acts as an ordinary governor, but possesses such influence that he can at once institute proceedings and enter upon duties which seem to materially alter for the worse the position of a colleague, he certainly seems to do more than an ordinary governor can do. It would probably be in vain for Dr. Borchardt, in any spirit of self-depreciation or with any other end in view, to seek to divest himself of the attributes of power and consequent responsibility which he possesses as far as the Pendlebury Children's Hospital is concerned. If Dr. Borchardt could prevent, as he says he did, Dr. Humphreys' dismissal, he could probably have done something more, and it is a great pity that he ever had recourse to the half-measure.

But this leads us to a part of Dr. Borchardt's letter which we must absolutely decline to discuss. Indeed, had it not been that Dr. Borchardt thinks himself aggrieved we should have hesitated to publish the passage in question. It was and is perfectly clear that there was something wrong between Dr. Borchardt and Dr. Humphreys, and we question how far matters will be mended by Dr. Borchardt thus placing his finger on the sore spot. What, however, was formerly surmised is now laid bare to view, and it is just possible that this probing of an old wound may tend towards an ultimate cure. We cannot, however, bring ourselves to see everything with Dr. Borchardt's spectacles. He thinks that "the impartial members of our profession who have followed the controversy will do him the justice to say that not he, but the friends of Dr. Humphreys are responsible for it." In a strict sense this may be true, for certainly Dr. Borchardt did not begin the controversy. But it is not the controversy which is in question, but the things which gave rise to it, and here, as we have said, Dr. Borchardt must be held responsible in a greater degree than the other governors of the Pendlebury Hospital. Fortunately, however, the controversy has not been without benefit. Already, as will be seen from our Manchester Correspondent's letter in another column, the governors of the Pendlebury Hospital have begun to set their house in order, and the Lady Superintendent has resigned. If Dr. Humphreys can draw any comfort from such changes, they may afford him some consolation in his affliction; they certainly show that the difficulties he had to encounter were not imaginary, whilst we also gladly recognise the desire of the governors to do what they can to remedy the defects of management which have been so prominently brought out by this discussion.

Finally, a word of warning. Our Correspondent suggests that the nursing should be completely under the control of the medical staff. They will be most unwise to accept such a responsibility. Much which concerns a nursing staff falls beyond the true domain of a medical practitioner. All such and such-like domestic arrangements should be under the control of a mixed committee, on which the staff is fully represented, with a good business man—medical or lay, it matters not which—as chairman.

THE ARTICULAR AND OSSEOUS LESIONS OF LOCOMOTOR ATAXY.

Last week we published a full account of the interesting discussion which took place at the meeting of the Pathological Society of London on February 3, regarding the articular and osseous lesions that take place occasionally in the course of locomotor ataxy. Dr. Buzzard introduced the subject, and exhibited three living specimens showing, in a striking degree, several of the changes described. The President of the Society (Mr. Hutchinson) was able to bring before the meeting, from the collection of Professor Charcot, of Paris, a series of casts illustrative of the great deformities produced by these lesions, and other interesting contributions towards the clinical and pathological elucidation of the subject were advanced by other speakers.

As Dr. Buzzard remarked, these lesions have hitherto received but little attention in this country, although they have frequently attracted much notice from some of our continental *confrères*, more especially from Professor Charcot and other French pathologists and physicians. We are inclined to believe that almost the first, if not the very first, account of them in English appeared in our own pages several years ago, in the shape of communications from Professor Ball. Dr. Clifford Allbutt recorded a case in the *St. George's Hospital Reports* for 1869, and since that time Dr. Buzzard himself seems to have been the only person in England who has publicly called the attention of the profession to this subject. Now that the matter has been ventilated, however, it is very probable that cases will be found to be more numerous than they are at present believed to be; and further, as Mr. Hutchinson remarked, that many anomalous specimens of joint-lesions in our museums will be found, on a careful examination of the histories, to be really examples of these ataxic changes, and not of ordinary rheumatoid arthritis.

As our readers will learn from the perusal of the report of the meeting, the main clinical and pathological facts hitherto ascertained regarding these occasionally-occurring tabetic lesions are the following:—The first manifestation of joint-affection is usually a rapid development of effusion in some one of the larger joints of the limbs, sooner or later after the occurrence of other well-known symptoms of locomotor ataxia. The effusion is usually so profuse as to distend the joint very markedly. Sometimes, too, it seems to be not confined to the joint, but to be also present below the muscles of the limb, which in that case is also swollen. Dr. Buzzard had found that many of the cases in which joint-lesions supervened had previously been characterised by paroxysms of the symptoms called by Charcot *crises gastriques*—attacks in which there is great pain in the stomach and chest, with incontrollable retching and vomiting. But the experience of Dr. Broadbent differed in this particular from that of Dr. Buzzard, for though the former had seen several cases of ataxy in which the *crises gastriques* were very marked, in only

one of these cases did joint-mischief follow. After the occurrence of the joint-effusion, there proceeds, usually very rapidly, a destructive change of all the joint-structures—synovial membrane, articular cartilage, bones, and ligaments. So rapid and extensive is this change in some cases, that within the space of three or five months the articular ends of the bones seem to be quite absorbed, and the capsular and ligamentous surroundings of the joints so relaxed and destroyed that spontaneous dislocation often results. And another remarkable feature throughout all this series of destructive changes from first to last is the almost complete absence of noticeable pain in the joints, so that, even when dislocation has resulted, the limbs may be moved about very freely in flail-like fashion, without causing the least uneasiness to the patient. And although the destruction of the structures of the joint may at times be so very great as to deprive the patient of power of voluntary movement of the parts, it is also surprising to find how much deformity, as in the hip-joint, has been sometimes present without the patient's having lost the power of walking fairly well. In addition to the merely atrophic lesions of the articular ends of the long bones, many of them become so brittle as to suffer spontaneous fracture, not only at the neck, but also in the diaphysis; and when such an event occurs there is sometimes an unusually large amount of callus thrown out in the process of repair. Sometimes, too, though rarely it would seem, new bony outgrowths are developed, as on the great trochanter of the femur, and some have also been found on the sheaths of tendons in the neighbourhood of joints.

As regards the pathological causation of these lesions, Charcot has attributed it to trophic nervous lesions, the exact seat and nature of which must still be regarded as matter for speculation. There seems, at any rate, little doubt that the local lesion is a kind of general osteo-arthritis, in which the bones as well as the other joint-structures are implicated; but the exact nature of this, as well as its exact determinating cause in the nervous system, together with many details as to the clinical aspects and relations of these osteo-arthritic changes, are points that have still to be investigated. But in the report of the discussion itself our readers will find most of what is known and believed regarding this very interesting subject.

THE WEEK.

TOPICS OF THE DAY.

A DEPUTATION last week waited upon Mr. Sclater-Booth to enlist the sympathy of the Government on the subject of the damage done to property through the escape of noxious fluids and gases from manufactories, and also to urge the desirability of again introducing the Noxious Gases Bill of last session, which had to be abandoned for want of time. Lord Derby, who introduced the deputation—amongst whom were Sir Wilbraham Egerton, Mr. Rathbone, Mr. Phillips, and the Mayor of Manchester,—expressed his disinclination to travel over the old familiar ground of their grievance, but would only say that the annoyance had never been worse than in the winter just past. They could show the President, in what might be called the poisoned districts, where the nuisance was most severely felt, telegraph wires affected in such a way that in a few weeks they became practically eaten away and unfit for use. Part of their mission, Lord Derby said, had been forestalled, since the President had already given notice of a Bill upon the subject with which they were dealing. But he trusted that Bill would deal effectually and permanently with the nuisance, so as to avoid having to raise the subject again, and he demonstrated the two points which he believed were of the greatest importance, viz., the question of collective responsibility, and the power of local boards to take measures. As matters at present stood, when a number of these works were close together there was no remedy at all, because the mischief could not be fixed on any one of them; and in endeavouring to abate the nuisance the local authority ought to be allowed to act for those who could not act for themselves. Mr. Sclater-Booth, in reply, assured the deputation that the Government were fully aware of the importance of the subject, and the Bill, which would be very similar to the measure produced last year, would have been introduced before if he had not desired to meet the deputation first, and hear any suggestions they might have to make.

We alluded last week to the fact that the law affecting baby-farming was capable of improvement, and a deputation of gentlemen interested in the matter recently attended at the Home Office, where they were received by a gentleman representing Mr. Cross. It was urged by the deputation that the Infant Life Protection Act should be strengthened by an extension of the provisions of registration of houses wherein infants under one year were taken in, for gain, by persons not relatives, and by the introduction of a more efficient system of inspection of these houses than at present exists. It was also suggested that Poor-law medical officers and medical officers of health should have power in these matters; while more stringent regulations should be issued for carrying out the provisions of the Act in boroughs throughout England, so as to overcome the extensive system of baby-farming well known to be still carried on. At present, also, the police have no right of entry, under the Act, to places where it is suspected that baby-farming is being carried on. The deputation received the usual assurance that their representations should be considered.

The half-yearly meeting of the Improved Industrial Dwellings Company was held last week at the Mansion House. A dividend at the rate of 5 per cent., free of income-tax, was declared, and it was stated in the report that the Company had 3929 dwellings in occupation or in course of erection, providing accommodation for 19,000 persons. In the course of the proceedings, the Chairman, Mr. Walter Morrison, observed that the whole system of legislation in regard to artisans' dwellings was thoroughly unsound, and actually gave a premium to the landlords who owned the worst dwellings to allow them to fall still further into dilapidation, so that they might be scheduled, and bought off the owners' hands at enormous prices.

The Parliamentary Bills Committee of the British Medical Association have been very busy lately, and the last deputation which they organised to wait upon the Home Secretary had for its object the proposed Coroners Bill. They pointed out that within the last forty years various failures had occurred in the administration of justice, especially in poisoning cases, owing to the want of scientific and medical knowledge on the part of coroners. It was urged that the law should allow of there being, as at present, medical coroners, or that the measure should provide the coroner with a medical assessor. They also pointed out that it was unfair and unjust that the medical witnesses in certain cases should be required to give their services gratuitously, as in the case of inquests on persons dying in public institutions. The process known as "viewing the body" by the jury was condemned as repulsive and barbarous, and recommended to be abolished. Mr. Cross explained that he himself was inclined to adopt the view that some medical knowledge was necessary for the guidance of the coroner; but he should have to inquire, before he decided the matter, the grounds upon which the Select Committee had made amendments in the Bill as first prepared; and he was anxious himself to give effect to the wishes of the medical

profession in this respect, considering that it would be advantageous generally to the administration of the law in the country.

The *Birmingham Daily Post* says—"The extreme convenience of telephonic communication for business and domestic purposes has induced the Committee of the Women's Hospital in that town to adopt it for the increased security of the patients under their charge." They have entered into arrangements for making a complete circuit between their in-patient department at Sparkhill, their out-patient department in the Priory, and the residences of the two Surgeons. This arrangement, it is expected, will save a great deal of trouble, and will enable emergencies to be dealt with without loss of time; it will also tend to obviate any difficulty which may have arisen from the removal of the in-patient department of the Hospital into the country.

No similar event for many years has excited such general regret in Plymouth and Devonport as the death of Rear-Admiral Hope, the Admiral Superintendent of the dockyard at that station. The Admiral had been suffering from typhoid fever, but his recovery was confidently anticipated, when congestion of the brain and lungs supervened, and in three hours he sank. A strict inquiry is to be held respecting the drainage of the terrace on which the official residence of the dockyard officers is situated. This sad occurrence is one more proof of the notorious and scandalous unhealthiness of many of the Government official residences. At Portsmouth typhoid fever is perpetually recurring, and only recently the principal medical officer of Haslar Hospital succumbed to its pernicious effects. Will it require the preventable death of an officer of higher rank than Rear-Admiral to induce the Government to institute a searching sanitary investigation, with a view of rendering these places at the least less dangerous to our officers than some of the unhealthy stations abroad?

Paris, it is acknowledged, has for many years set the fashion in many directions, but the latest novelty which affects the medical profession is so unique that it deserves to be recorded. An auction recently took place, at which over two thousand unclaimed prizes of the lottery instituted for the benefit of the sufferers by the inundations in Spain were brought to the hammer without reserve, and knocked down to the highest bidders. Amongst these prizes were a number of vouchers entitling the holders to gratuitous consultations with eminent Parisian physicians, the original winners having evidently declined to avail themselves of this novel method of obtaining "advice gratis." There were also several franks issued by licensed midwives of renown, which conferred upon the holders the right of applying for the services of these ladies upon interesting occasions; and it is stated that the whole of these valuable vouchers were eagerly competed for at this very singular auction.

A distressing occurrence is reported from Kingsbridge, which should cause some inquiry to be made into the method of affording parochial relief in that district. There is at the present time an epidemic of measles in the Kingsbridge Union, and during its progress the members of one family were reduced to great distress. The father walked three miles to a relieving officer, but was directed to attend on the next board day. Although still very ill and half-famished, he walked to Kingsbridge, and was ordered relief, and he then returned home, a distance altogether of eight miles. The family occupied one room, and next night, disease being aggravated by exposure and exhaustion, the father died. There were several children, but none of them sought for any assistance. At five next morning the mother gave birth to a child, and three hours after the eldest girl died. The family remained in this condition for some hours before their miserable state was discovered.

Last week's *Gazette* announces that the Queen has been pleased to grant unto Surgeon-General Thomas Longmore, C.B., Professor of Military Surgery at the Army Medical School, Netley, her Royal licence and authority that he may accept and wear the insignia of an officer of the Order of the Legion of Honour, conferred upon him by the President of the French Republic as a promotion from the Fifth Class of that Order, which he received in 1856, when surgeon of the 19th Regiment, for his services in the Crimean War.

It is announced, and certainly not too soon, that a new Warrant for the Naval Medical Service will shortly be issued, which will place it, in point of pay, etc., on a similar footing to the Army Medical Department. The wonder for some time has been how the Admiralty contrived to find a sufficient number of medical officers to meet the requirements of the Department.

H.R.H. the Prince of Wales has consented to preside at a festival dinner, in aid of the funds of the Westminster Hospital, to be held at Willis's Rooms on Saturday, March 13. H.R.H. the Duke of Edinburgh is also greatly interesting himself in behalf of some of our medical charities, and will take part in a concert to be held in the Albert Hall during the season, in aid of the funds of the Queen-square National Hospital for the Paralysed and Epileptic.

We have this week to record the deaths of two more of the Army medical officers serving, or having served, with the troops engaged in the Afghan campaigns. On January 19, Dr. A. C. Keith, of the Army Medical Department, died at Cabul from pneumonia, as had Deputy Surgeon-General J. H. Porter shortly before. And on the 4th inst., Surgeon-Major A. Robinson Hall died, at Malta, from dysentery, contracted while serving in Afghanistan.

THE PREMIER AND DR. FARR.

From the explanation given by the Earl of Beaconsfield in the House of Lords last week, the case of Dr. Farr and the vacant Registrar-Generalship furnishes another instance of the old adage, "Save me from my friends." In the face of an official document asking for the superannuation of Dr. Farr on account of his advanced age and declining health, it ceases to be, if it ever was, at all extraordinary that the Government should not have conferred upon him an appointment at least as onerous as the post already so ably filled by him, and at a time when the duties of it would be largely increased by the taking of the census next year. In common with the great body of Dr. Farr's well-wishers, we very much regret the loss which the public will experience in his retirement from the post he has so long, and to excellent purpose, filled, but it would be somewhat selfish to insist upon Dr. Farr's sacrificing his well-earned retirement after so many years of useful and active service, merely for the accommodation of the public. It having been now satisfactorily explained by the highest authority that no slight was intended either to Dr. Farr, or through him to the medical profession, the subject may very well be allowed to drop; and if we might venture to express a hope in relation to this case, it would be, that in future, under any similar circumstances, intending redressors of grievances will make themselves thoroughly acquainted with the whole of the facts before raising a useless agitation. We may regret that the office of Registrar-General should be made a piece of political preferment; but it always has been such, and to continue to make a stir about it, in the present instance at any rate, on the part of the profession seems to us to betray a want of dignity and self-respect.

SURGEON ALEXANDER CROMBIE KEITH, M.B., C.M. ABER.

Dr. Alexander Crombie Keith was the youngest son of the late Dr. Keith, of Aberdeen—one of the foremost of the many eminent teachers who made the Aberdeen School so famous twenty years ago. Young Keith graduated in medicine and surgery in the University of Aberdeen in 1874, and soon after entered the Medical Service. He was immediately sent to India, and last autumn was attached to the force under General Roberts which advanced upon Cabul. Keith's name was frequently mentioned in the reports of the engagements around that city, and of the medical arrangements at Sherpur; but his brave and useful career was suddenly cut short on January 19, when he succumbed to an attack of pneumonia, at the age of thirty, only ten days after the death of his friend and chief, Surgeon-General Porter, of the same disease. Keith was a young fellow of remarkably genial, amiable disposition, and of great industry and perseverance. He was devoted to the service which he had chosen as his profession; and had he lived would doubtless have sustained most honourably the professional fame of the good name which he bore.

PILOCARPIN IN THE TREATMENT OF PRURIGO: THE DIAGNOSIS OF PRURIGO.

Professor Oscar Simon, of Breslau (*Berliner Klinische Wochenschrift*, No. 49, 1879) has used preparations of jaborandi with good effect in cases of prurigo both in adults and children. Hebra's prurigo, which is a rare disease in England, is comparatively common in Breslau, and forms about 3 per cent. of the non-venereal cases in the skin clinic of the University; this method of treatment, therefore, is of less interest to us than to the Germans, but it deserves at least a short mention here. Either subcutaneous injections of one gramme of a 2 per cent. solution of hydrochlorate of pilocarpin or a syrup of jaborandi were used. The latter is an infusion of three parts jaborandi-leaves in fifteen parts boiling water, filtered and mixed with eighteen parts sugar. The dose for an adult is two or three tablespoonfuls, for small children a teaspoonful, for older children two teaspoonfuls. After the dose the patient was always wrapped up in blankets for two or three hours. The salivation and other well-known effects of pilocarpin accompany the sweating, which seems so valuable to the pruriginous patients. Professor Simon compares its influence to that of a bath or an ointment. It softens the dry, harsh skin, and probably relieves the openings of the sweat-ducts of the accumulations of epidermis which, as the microscope shows, blocks them in prurigo. On the average, a fortnight's pilocarpin treatment temporarily cures moderately severe cases of prurigo, while a month suffices for all but the very worst. We need scarcely add that it does not permanently cure; relapses occur as under other plans of treatment. Professor Simon has not found pilocarpin of use in other skin affections. In two or three cases of alopecia the result was undecided. He makes some valuable remarks in the second part of his paper on the natural history of true prurigo; especially he points out the difficulty of diagnosing it accurately in the early years of life owing to the similarity of the lesions to those of infantile prurigo (*Lichen urticatus*). He considers that we cannot be absolutely sure of the diagnosis before the end of the fourth year. "A prurigo which runs on after this is incurable." We quote Professor Simon's conclusion without comment, except that we must not be understood to give it our unqualified assent. As to etiology, he agrees with Hebra that the parents of the pruriginous, and especially the mothers, are often phthisical, but he has never seen a case of hereditary transmission, though more than one child in the same family is sometimes affected.

THE BENETT STANFORD PRIZE.

Eighteen essays have been sent in for the prize of £100 offered by Mr. V. F. Benett Stanford, M.P., for the best essay on "Hydrophobia: its Nature, Prevention, and Treatment." The prize, it will be remembered, is to be awarded by the College of Physicians; and the conditions under which it was to be competed for had nothing new in them, save this—that "the essay may be the joint production of two or more authors." The College also set out the following questions as specially requiring investigation:—The origin and history of outbreaks of rabies, particularly in the United Kingdom and its dependencies; the best mode of prevention of rabies; the characteristics of rabies during life; and the anatomical and chemical changes which are associated with the disease in its successive stages, particularly in its commencement: the origin of hydrophobia in man; the chemical and anatomical morbid changes observed in the subjects of the disease, with special reference to those having their seat in the organs of the nervous system, and in the salivary glands; the symptoms of the disease, particularly of its early stage, as illustrated in well-observed cases; the diagnosis of the disease in doubtful cases, from conditions more or less resembling it; the alleged prolonged latency of the malady; and the efficacy of the various remedies and modes of preventing the disease which have been proposed, and what plan of treatment, whether prophylactive or curative, it would be most desirable to recommend for future trial. As was to be expected, some of the essays sent in are of considerable length and elaborateness. The judges have a task of no little labour before them, and a considerable time must elapse before they can be expected to make their award.

BROADMOOR CRIMINAL LUNATIC ASYLUM.

The annual report on the Broadmoor Criminal Lunatic Asylum for the year 1878 returns the daily average number of patients resident during the year as 479. During the year twenty-six men and sixteen women were admitted; six men and four women were discharged upon recovery; seventeen men and three women were transferred to other asylums; and nine men and one woman died. It is almost unnecessary to say that discharges from this Asylum do not take place in the same ratio as they do from asylums of a different character; nevertheless, from the opening of the building in 1863 down to the end of the year 1878 the number of persons discharged out of custody amounted to ninety-five. In the majority of instances the warrant of discharge contained the proviso that the person to whom it related would be liable to be ordered to return into custody on its being shown to the satisfaction of the Secretary of State that he was no longer a fit person to remain at large; in only a few cases the warrant of discharge was unconditional. In addition to the foregoing number, fifty-nine persons have been returned since the opening of the Asylum to the prisons from whence they came. The ten deaths were all due to ordinary causes, and the rate of mortality was 2·08 per cent. for the year; the average age at death was fifty-seven years, the greatest age being seventy-nine, and the lowest thirty-one. The report alludes to a striking instance of the peculiarity of our laws. Ten of the inmates of Broadmoor were tried in Scotland: had these persons happened to be inmates of Perth Prison instead of being at Broadmoor at the time of the expiration of their respective sentences, they would have been transferred from thence, in due course, to the several district asylums in Scotland to which they belong; but as they had been sent from Scotland into England during the currency of their sentences, and as they were in England at the time when

their sentences expired, they still remain inmates of a criminal lunatic asylum, for want, apparently, of the legal power to re-transfer them from England to Scotland. No change has occurred during the year in the medical staff, and Dr. Nicholson and Dr. Isaac are still in medical charge of the Asylum.

THE PARKES MUSEUM OF HYGIENE.

On Saturday, the 14th inst., Dr. Steele, of Guy's Hospital, gave a demonstration on "The Hospital and Sick-Room," at the Parkes Museum. The subject was introduced by a reference to the apparent antagonism between the terms "hygiene" and the "sick-room," and Dr. Steele explained that while it is the object of the art and science of medicine to cure disease, it is equally the object of hygiene to maintain health, and that in their dual capacity of warding off death the one may be said to be the handmaid of the other. He described, and illustrated by the collection of articles presented to the Museum, the various means and appliances for insuring the proper ventilation of the sick-room, for applying heat, cold, and moisture to the body, and for securing disinfection; and exhibited and explained various forms of bedsteads, mattresses, and apparatus for aiding and raising the invalid, and so forth. On Saturday, February 28, Prof. W. H. Corfield will give a demonstration on "Ventilation," and on Saturday, March 13, Mr. Rogers Field, C.E., one on "House Drainage." Each demonstration will commence at half-past three, the Museum being open half an hour previously.

DUBLIN PATHOLOGICAL SOCIETY.

At the meeting of this Society on Saturday, February 7 (Dr. E. H. Bennett, President, in the chair), a resolution expressing deep regret at the death of Sir Dominic J. Corrigan, Bart., M.D., who was one of the founders of the Society, and of heartfelt sympathy with Lady Corrigan and the members of her family, was unanimously passed. Dr. G. F. Duffey then showed specimens from the body of a woman aged sixty years, who had been admitted to Mercer's Hospital, suffering from persistent vomiting, constipation, thirst, and debility. There was extensive ascites, but no jaundice. The urine was non-albuminous. The diagnosis was—visceral cancer with fæcal obstruction. The parietal layer of the peritoneum was studded with small nodules of carcinoma. The intestines were glued together by lymph and studded over with similar miliary nodules. The omentum was shrunken and adherent to the stomach, the mucous membrane of which was congested. There was extensive scirrhus of the pylorus, causing thickening and obstruction. The liver had, strange to say, escaped the malignant deposit, but the spleen was much affected by it. There was double hydrothorax. The lungs were in parts emphysematous. Cancerous nodules were found over both surfaces of the diaphragm and on the lower surface of the lungs, especially on the left side. The uterus, etc., were normal. The secondary cancerous disease of the left pleura (which alone was affected) was probably due to extension through the diaphragmatic canaliculi described by Recklinghausen. Mr. Thomson laid before the Society the heart, portion of the abdominal aorta and neighbouring arteries, and a hernia, from the body of a woman, aged twenty-eight, who had suffered from acute rheumatism with endocarditis in September, 1879. Two months afterwards, on November 2, numbness of both lower extremities was complained of. Six days later a bluish tinge overspread the left leg, and dry gangrene set in. Bullæ appeared on November 21. The patient died on December 16, six weeks after the symptoms showed themselves. There had been a double cardiac murmur and a friction-sound at the apex of the heart. At the apex of the left ventricle an old yellow clot was discovered; it was entangled in the trabeculæ. There were evidences of endocarditis around the aortic and mitral valves. About two inches above the bifurcation of the abdominal aorta there was a large embolus. The left common iliac and all the succeeding arteries were occluded. On the right side the common iliac and a portion of the external iliac arteries were likewise blocked. There was also an irreducible hernia of the cæcum, which had escaped through the right femoral ring, to the anterior portion of which it had become adherent. An artificial anus had been formed.

THE LATE SIR DOMINIC J. CORRIGAN, BART.

In our obituary of Sir Dominic Corrigan it was erroneously stated that "his *only* daughter tended him with untiring devotion through the feebleness of the closing years of life." To Sir Dominic and Lady Corrigan three daughters were born. The eldest, Mary, married, in 1864, Mr. Richard Martin, D.L., of Merrion-square, Dublin; the second, Cecilia Mary, was Sir Dominic's faithful companion to the end; while the third, Joanna Mary, died young in the year 1858. In the memoir it was also stated that Sir Dominic became connected with the Carmichael School in 1833. It was not until some years subsequently that his connexion with that School began; about the same time that he became attached to the House of Industry Hospitals as Visiting Physician—that is, in or about the year 1840. His intimate relations with the Pathological Society of Dublin and with the Zoological Society of Ireland should also be noted. To the former Society, of which he was an original member and an ex-President, he made many communications of great value. The latter body at one time owed almost its very existence to Sir Dominic's open-handed generosity and public spirit.

THE HEALTH OF SCOTLAND FOR THE QUARTER ENDING DECEMBER, 1879.

The Registrar-General for Scotland has recently issued his quarterly return for the period ending December 31 last, from which it will be gathered that 30,064 births and 17,408 deaths were registered during the last three months of 1879. These figures represent an annual birth-rate equal to 3·32 per cent., and a death-rate equal to 2·192 per cent. of the population. On an average 326·78 births were registered daily throughout the quarter. The mortality from all cases was 1808 in October, 1894 in November, and 2897 in December, and may be regarded as unusually moderate. The Registrar-General notes that, on an average, a period of 15·432 days elapses between the occurrence of a birth and the completion of its registration, the legal period allowed being twenty-one days. Deaths, however, are registered far more promptly than births; the average interval between the occurrence of a death and the completion of its registration is believed to be 1·466 days. Of the eight principal towns in Scotland, Paisley had the highest and Perth the lowest death-rate; in all of them the mortality of the last quarter of the past year was less than that recorded for the corresponding period of 1878. The deaths from zymotic diseases constituted about 16·1 per cent. of the total mortality, indicating no particularly unfavourable condition of the health of the principal towns. One death only was recorded from small-pox; it occurred in December in Edinburgh, and it is stated that the sufferer, a male, aged two months, had not been vaccinated. Diseases of the respiratory system caused 309 deaths in October, 435 in November, and 956 in December. Of all the deaths from specified causes fully 26·3 per cent. were referred to diseases of the respiratory system, and nearly 18 per cent. were attributed to bronchitis alone. In

connexion with the foregoing statistics it may not be out of place to add that the month of October had a rather low mean temperature, but there was little rain or wind; in November, for the first time for twelve months, the mean temperature of all the eight towns together was observed to be slightly above the mean of former years. December was, on the whole, cold and dry, with little wind; the earlier part of the month was exceedingly cold, but towards the end the weather became remarkably mild.

THE RELATIONSHIP OF ABSORPTION BY THE SKIN TO ALBUMINURIA.

Dr. O. Lassar (*Virchow's Archiv*, lxxvii., 157) has lately shown that if rabbits or dogs have a large portion of skin painted with a croton-oil liniment, the hair having been previously removed by calcium sulphide, in addition to the eczema caused by the oil they suffer from severe albuminuria and die in a few days, without the occurrence of inflammatory changes in the kidneys. On the other hand, if inflammation is excited, not in the skin, but in the subcutaneous cellular tissue, by injecting a 5 per cent. emulsion of turpentine the urine remains free from albumen. It appears, in fact, that in the first case the albuminuria does not depend on the inflammation of the skin, but on the absorption of the croton oil. According to Lassar's experiments, large quantities both of non-irritating oils and fats (olive oil, cod oil), and also of irritating or poisonous substances (croton oil, petroleum, chromate of potash), can enter the circulation through the skin, and be carried to the kidneys as well as to the other organs of the body. The former, however, are able to pass through the renal epithelium without injuring it; whereas the latter, as soon as they are excreted in a sufficiently concentrated form, materially damage its delicate structure. In the case of petroleum, Lassar has observed that the changes in the kidneys caused by its excretion pass through three stages. In the first there is no visible alteration of the epithelial cells, but they permit a resinous matter, which is formed from the petroleum within the body, to pass out in the urine; in the second they become permeable to diffusible peptones, and in the third to serum-albumen. Lassar explains a great part of the phenomena which have been observed after varnishing the skin of animals with different irritating substances, including linseed oil, by the changes they induce in the renal epithelium. In scarlet fever also it is probable that the latter suffers in excreting the infective material on which the disease depends.

THE INSANITARY CONDITION OF INCE-IN-MAKERFIELD.

Presumably on account of reports which reached the Local Government Board as to the insanitary condition of Ince-in-Makerfield (though this is not stated), Dr. H. Franklin Parsons was despatched to the neighbourhood to ascertain the real state of affairs existing in the district. Ince-in-Makerfield is an urban sanitary district in Lancashire, not far from Wigan, in the very heart of the coal country, the deepest collieries in Britain being situated in the township. The population consists almost entirely of the labouring-classes, and the small shopkeepers who supply them with necessaries; and it more than doubled itself between 1851 and 1861; and between 1861 and 1871 increased 45 per cent. The greater part of the houses are cottages, built in continuous rows, but there are no cellar dwellings. It is scarcely necessary to follow the report through its description of the sanitary defects found by Dr. Parsons. The only exception to the usual list of shortcomings in similar instances appears to have been the water-supply, which is in the hands of the Local Board, the water being procured from wells at Golborne, five miles south of Ince, and so situate as to be apparently free from any risk of pollution. The water is supplied on the constant system, and its hardness is its only objectionable feature; but this is not at all excessive. The vital statistics of the locality show that both birth and death rates in Ince are high—the former excessively so; proving that the population must be, on the average, a young one, consisting mainly of children, of young adults, and those at the prime of life, at the child-producing ages. The death-rate is certainly high, but, after reading Dr. Parsons' report, one wonders that it is not higher. The worst feature, however, in connexion with it is the statement that during the last four years and three-quarters scarlet fever and enteric fever have apparently never been absent from the district for long together, deaths occurring from them every year. In looking for the probable causes of the high rate of mortality existing at Ince, Dr. Parsons thinks they may be grouped under two headings. First, local insanitary conditions, which the sanitary authority in their public capacity can remedy; and second, social and domestic conditions and habits unfavourable to health, which for the most part lie beyond the cognisance of public authorities, and for the remedying of which we must look to education, and the gradual adoption of a higher standard of life. Among the former class it is essential to note the unsatisfactory method of excrement disposal—large wet open middens used in common by several houses, and giving off their effluvia within five to seven yards of the back doors of the houses; unpaved back-yards fouled by excreta and refuse, which can never be properly cleansed; and dirty unmade streets, with pools of stagnant water, wetting the feet of those who pass through them, and fouled with refuse and filth of all kinds. Among the latter, the principal is the prevalent neglect and mismanagement of children. Early marriages are frequent; and the mothers, principally factory workers, have but little knowledge or experience of the management of a home. Moreover, many of the women go out to work, leaving their infants to the care of elder children. Great carelessness appears to prevail, besides, among the population at large with reference to the spread of infectious diseases. If a family happen to be attacked with scarlet fever, the neighbours all come to see the sick person, and often bring their children; and omitting to do this would be considered an unneighbourly act. Dr. Parsons concludes his report with the usual recommendations and amendments and improvements suggested by personal and close inspection of the district.

Suits for Malpraxis.—The *New York Med. Record* (December 20) strongly commends some resolutions passed by the Baltimore Medical Society in reference to these suits. They are—"1. There having occurred of late several instances of unjust and unwarrantable prosecutions of members of the medical profession for alleged malpractice, with the evident intention of mulcting them in damages, we deem it advisable, for the protection of the profession, to urge upon them not to lend aid or countenance to such efforts by unguarded expression of opinion. 2. Resolved by the Medical Society of Baltimore, that we will not aid, abet, or encourage any proceeding favouring suits against members of our profession of good standing. 3. We will uphold the dignity and honour of the profession under all circumstances, and support and sustain its members when shadowed by unjust demands, or assailed by unworthy asseverations." The *Record* observes "that the foundation for such suits is almost always laid by an ill-advised remark by a brother practitioner, if not by open hostility on his part. Not only should such remarks be discouraged, but members making them should be disciplined by the societies. It is bad enough to be compelled to testify as an impartial expert, but when a medical man becomes a willing witness against his brother, he fathoms the lowest depths of professional meanness."

ON EXTIRPATION OF THE PHARYNX.(a)

By PROF. VON LANGENBECK, of Berlin.

THE following paper, which was read before the Eighth Congress of German Surgeons assembled in Berlin last year, will be of no little interest to English surgeons, though very few may be bold enough to follow Langenbeck's example:—

It may appear somewhat bold if I venture to claim attention to an operation which, up to the present time, has only yielded unfavourable results. It is, however, this very circumstance which has induced me to bring the subject forward in this place, in the hope that, with united effort, we may succeed in introducing into surgical practice an operation which, though practicable as regards its performance, is yet very dangerous as to its results.

We should, on first thoughts, be inclined to believe that malignant tumours of the pharynx would be of frequent occurrence, because the gullet is exposed to such a variety of irritations. It is, nevertheless, a fact, that pharyngeal carcinoma is very unusual, and only a comparatively few cases are recorded in our literature. In an excellent work by A. von Winniwarter ("Contributions to the Statistics of Carcinoma," Stuttgart, 1878), among 548 carcinomas which were observed during eight years in Billroth's clinic, not one case of carcinoma of the pharynx is recorded; and in my own clinic, among 230 cases, occurring during the years 1850-56, which Professor Krönlein has accurately recorded, only one case was observed. Thus it is perhaps a mere coincidence that during the year 1878 I had four cases of the kind under my observation. I must add that these five cases did not occur in individuals of advanced age—that the youngest was a woman aged thirty-two years, the oldest a man of fifty-eight years; and thus no other proof is needed that further attempts to overcome the dangers of the operation must be made.

The operation is the more justifiable, as, since Billroth's first attempt in 1873, a series of successful extirpations of the larynx has been recorded. In extirpation of the larynx the anterior wall of the pharynx is almost necessarily removed; and if one compares the immediate dangers of this operation with those of extirpation of the pharynx, one would be inclined to regard the latter as relatively free from danger.

Under these circumstances, perhaps I may be reproached for not having removed the larynx also in my cases, and the more so as in two of my cases portions of the larynx had to be removed; further, as I shall show, the great danger of pharynx-extirpation belongs not to the operation itself, but rather to the leaving behind of the larynx.

The extirpation of the pharynx alone, without simultaneous removal of larynx, has, to the best of my knowledge, not yet been accomplished. I shall, however, show that the operation can be done according to rule; that it is not only practicable, but also that it does not present any very great difficulty.

Before proceeding to the steps of the operation, allow me to draw attention to some of the points which characterise pharyngeal carcinoma. If the disease affect the lateral parts of the pharynx, a considerable swelling of the upper cervical region of the affected side will become evident, and the larynx will gradually incline more and more to the opposite side, so that the pomum Adami will be completely displaced from the middle line of the neck. If the anterior or the posterior pharyngeal wall be attacked, the larynx is pushed forward, and may be elevated to such a degree that the pomum Adami will almost touch the chin. If the disease is confined to the pharynx, the voice is modified, the patient speaks as though he had a lump in the throat; swallowing is more or less interfered with, but there is no respiratory difficulty. If the cancer now spread to the larynx, so that the aryteno-epiglottic ligaments, arytenoid cartilages, and vocal cords become implicated, hoarseness becomes marked and goes on even to aphonia, and there is more or less stridor during inspiration. But pronounced dyspnœa, such as is present in carcinoma of the larynx, was not found in any of my own cases. Deglutition, however, was both painful and difficult, and it may, as in one of my cases in which the posterior and left parts of the pharynx were affected, become altogether impossible to swallow solid food. Lateral carcinoma of the pharynx will sometimes early implicate the great vessels; and in one case I was obliged to leave behind a thin sheath of the morbid growth on the internal jugular vein in order not to injure it. Secondary affection of the deep lymphatics of the neck also occurs, and I had to give up one operation in consequence of swelling of the glands from the bifurcation of the carotid as low down as the clavicle. The removal of the whole pharynx without injuring the larynx is rendered possible by the looseness of the connective tissue, through which it is joined to neighbouring parts.

As anterior wall of the pharynx must be regarded all that portion of the pharyngeal mucous membrane which extends from the hyo-epiglottic fold along the border of the epiglottis, the ary-epiglottic fold, and the inter-arytenoid cleft down as far as the hinder part of the cricoid cartilage. The anterior wall, therefore, corresponds to the posterior convex wall of the larynx, or, in other words, to the hinder surface of the larynx, to which it is everywhere adherent by means of elastic and loose connective tissue. They can therefore be easily separated without injury to the cartilage. Still more loosely is the pharynx attached to the vetebral column (the five upper cervical vertebræ) and the adjacent anterior recti and longi colli muscles, and the anterior common ligament; hence it is easily detached with any blunt instrument, such as an elevator, especially after the mucous membrane has been previously cut through, say at a level of the lower border of the soft palate. The lateral parts of the pharynx are held apart by the cornua of the hyoid bone. Their attachment to neighbouring parts is chiefly accomplished by the pharyngeal muscles; and this attachment too is by means of a fatless loose connective tissue, which allows of the easy extirpation of any tumours (sarcoma of the tonsils, for instance) such as affect the lateral parts of the pharynx, without endangering the adjacent carotid vessels.

The extirpation of tumours from the upper part of the lateral wall of the pharynx is best accomplished, as I have already shown, after having previously sawn through the lower jaw. Large tumours growing from the base of the skull can be extirpated through the mouth (Busch, *Proceedings of the German Association of Surgeons*, 1877, page 115). A retro-pharyngeal myxo-chondroma, situated opposite the second and third cervical vertebræ, was removed by Von Heine (*Ibid.*, page 115), by means of an incision extending from the mastoid process to the greater cornu of the hyoid bone. Finally, growths which are situated in the region of the aryepiglottic ligament can be best got at by the sub-hyoid pharyngotomy (B. von Langenbeck, *Berliner Klinische Wochenschrift*, 1870, No. 2), and may be in this way easily removed.

None of these operations, however, suffice for the removal of such extensive disease as cancer generally seems to be, whether it attack the anterior, the posterior, or the lateral part of the pharynx. Carcinoma at the level of the upper part of the larynx can only be extirpated by removing the corresponding part of the pharyngeal wall, and this can only be done by entering the pharynx through the lateral part of the neck, and then pushing aside the larynx. In the cases I performed a preliminary operation of tracheotomy—in two the high, in one the low operation; and in the latter I used Trendelenburg's tamponade apparatus, and administered chloroform through it. In performing the tracheotomy, if the head be thrown too far back, there is danger of suffocation by the pharyngeal tumour pressing on the trachea. This happened at the first operation, and it was necessary to immediately open the trachea, and perform artificial respiration in order to restore the patient. In performing the operation the head must be thrown back and turned towards the opposite side.

The superficial incision commences midway between the angle and symphysis of the jaw, and runs over the great cornu of the hyoid in the direction of the sterno-thyroid muscle, as low down as the cricoid, or further. The superficial fasciæ, platysma, and omo-hyoid muscles having been cut through, the deeper structures are next taken. The lingual and superior thyroid arteries are taken up between two pairs of forceps, cut, and tied. In the same way, too, the branches going to the facial vein. The superior laryngeal nerve has to be cut. Then the tendons of the digastric

(a) Von Langenbeck's *Archiv für Klinische Chirurgie*, vol. xxiv., part 4.

(posterior belly) and the stylo-hyoid muscles are separated from the hyoid bone, and the pharynx is opened through the whole extent of the wound. The pharynx is now freely examined with the fingers, and the extent of the disease ascertained. Then, in order to free the pharynx, the larynx must be displaced towards the opposite side, and more or less rotated on its axis, in order to make the corresponding anterior wall of the pharynx the more accessible. This is all accomplished through the wound; while, to free the posterior wall, a transverse incision is made below the level of the palate, and the pharynx is then dissected or torn away from the vertebral column by an elevator.

If then, as I have tried to show, the extirpation of the pharynx is not by any means a difficult or a very dangerous operation, the question arises, Why has it been so fatal? Except in the second case, that of a very debilitated man, who seemed to die from the effects of unavoidable capillary hæmorrhage, the greatest danger appears to be the pneumonia caused by the escape of foreign matters into the lungs. For, in spite of the most careful feeding by the œsophageal tube, as Case 3 shows, there is great danger of foreign matters getting into the lungs during fits of vomiting, and so setting up inflammation and even gangrene.

It may be said that section of the two branches of the superior laryngeal nerve must be held responsible. These two branches so cross the floor of the wound that it is impossible to avoid cutting them. The inner branch supplies (as is well known) sensation to the laryngeal mucous membrane, while the external one is the motor nerve of the inferior constrictor and of the crico-thyroid muscle (Longet). This latter muscle is the tensor of the vocal cord, and, after section of its nerve in animals, hoarseness supervenes.

It is not possible to say exactly what influence section of this nerve may have exercised in the production of the pneumonia in these cases, since in each case portions of the larynx had also to be removed.

At my first operation I did not attach much importance to the injury of this nerve, for in many previous cases of extirpation of deeply seated tumours in this region I have cut it without having seen any ill effects therefrom.

The history of the three cases in which the operation was performed is appended, from which we give the following summary:—

Case 1.—Male, aged forty-eight. Carcinoma of the pharynx of nine months' duration. Preliminary tracheotomy; operation lasted three-quarters of an hour. Died on the third day of gangrene of lung. No post-mortem allowed.

Case 2.—Male, aged seventy-eight. Epithelial cancer of the hinder pharyngeal wall. Extirpation, and of a part also of the larynx. Death within twenty-four hours from the effects of hæmorrhage, chiefly capillary. No secondary growths discovered at the autopsy.

Case 3.—Female, aged fifty-four. Epithelial cancer of the pharynx and larynx. Family history of cancer. Preliminary tracheotomy. Patient died on the thirteenth day after the operation. The autopsy showed pleurisy, with patches of pneumonia in both lungs. The sheath of the jugular vein showed the remains of some of the growth, which could not be removed.

THE CHOLERA AT KANKAMPATTI.

The report of the proceedings of Mr. Cornish, Sanitary Commissioner for Madras, for the months of July and August, 1879, contains a report on an outbreak of cholera at Kankampatti, a petty village in Southern India. This furnishes such a complete cabinet picture of Indian village life, manners, and diseases, and of the influence exerted by Government, that we venture to lay the facts before our readers.

Of Indian villages in general, Mr. Cornish gives the following picture:—

"After visiting many hundreds or even thousands of villages in different parts of India, I may state that the following features are more or less common to all:—(1) The wells or tanks are liable to constant pollution; (2) the conservancy is generally defective; (3) the outskirts of the village site are used for purposes of nature; and (4) in all villages the surface pollution of the soil is increased by the practice of keeping cattle within the house enclosures. I have no doubt that the condition of Kankampatti as to cleanliness was very much that of the village alongside, in which no case of cholera occurred. Of every village in the country it may certainly be said that cleanliness of air, soil, and water is not regarded by the people as important to their well-being."

Of Kankampatti in particular, Dr. King gives the following sketch:—

"This small village, of forty-eight houses and 202 inhabitants, . . . consists of a group of huts placed without any attempt at regularity, and separated by very narrow tortuous lanes, and small yards, in which cattle are kept. . . . There is no water in the village itself, which is built on high ground. The only source of supply for all purposes is a small (open square well) 'guntah,' not more than thirty feet square, about a hundred yards away, and considerably lower down. Between this and the village is a field, which no doubt receives a fair proportion of the excreta of the inhabitants, and the surface drainage of which flows without impediment into the guntah."

The water of this well, when examined by Dr. Porter, was found to have the following properties:—Colour, greenish, partly removed by filtration; taste, mawkish; smell, somewhat uriniferous; turbidity, slight; reaction, alkaline; deposit, confervæ and animalculæ, etc.

Such being the village and its water-supply, the following tragedy takes place. On February 1, 1876, a wedding party came to the village, two, or at least one, of whom were suffering from cholera, and whose clothes were washed in the guntah, which was the water-supply of the village. The illness first appeared on the 3rd, and quickly spread among the other inmates of the village, till, on the 10th inst., the maximum daily number of deaths was reached—eleven.

At this stage we get a glimpse of the truly benevolent character of the Indian governmental system. The collector of the district, Mr. Longley, sent his head assistant to the village with medicines, etc. The infected water-supply was stopped, and water was brought from a purer source, at a greater distance from the village. The dead bodies, which had been left to be eaten by jackals, were decently buried or burned, and in a short time the epidemic was arrested: but not before fifty-three persons out of a population of 202 had died.

So far, so good; but we crave the reader's attention to what follows. Dr. H. King, who was acting as deputy to Mr. Cornish, and reporting on the epidemic, in the absence of his principal, to the Government, had the audacity to make use of the following expression in his report. He said that the state of things at Kankampatti favoured the spread of any disease communicable from man to man, "and the notion that cholera is not so communicable (although unfortunately entertained by some physicians of experience) would, in the present state of our knowledge, be ridiculous if it were not pernicious." Commenting on the condition of the water, he says:—"In the opinion of all authorities, except a crotchetty few, there could be no more effectual way of spreading the disease more widely in its severest form."

Unfortunately for Dr. King, there seems to be some one in authority among the Army Sanitary Commission at Calcutta with the Governor-General of India who does not believe that cholera is communicable by personal intercourse and foul water, and consequently Dr. King's report was sent back with a severe comment to the Government at Madras. The matter was referred to Mr. Cornish, who investigated the whole case afresh, and amply vindicated his subordinate, except in the matter of one or two very trifling misstatements. It will probably be a matter of surprise to us in England that anyone should be sceptical as to the communicability of cholera through the excreta of patients, especially when the medium by which it is conveyed is the drinking-water.

Discharge of Small Urinary Calculi.—In order to assist the discharge of small calculi, Dr. Mercier has the patient first laid on his belly, when the calculi fall, by the effect of gravity, on to the anterior wall of the bladder. The patient is then gently raised as if on all-fours, and, while so held, discharges his urine. The calculi, which have thus been prevented returning to the cul-de-sac of the bladder, behind the prostate, are carried into the urethra by the micturition.—*Progrès Méd.*, February 7.

ON THE FORMATION OF THE EYELID BY WOLFE'S METHOD.

In the *Centralblatt* for October there is a report of the meeting of the International Congress at Amsterdam, where Dr. Martin (of Cognac) reported, at the Ophthalmological Section, a successful case of "Blepharoplastik" of three weeks' standing, treated by Dr. Wolfe's method without pedicle. Professor Zehender stated that three operations done by him for the formation of new eyelids did not prove quite satisfactory. The practical importance of the operation is evident, when we consider that it saves us from cutting a flap from the face to mend the face, which, if unsuccessful, introduces a new scar. And can we say of all these plastic operations that they generally prove successful or that they do not shrink after a time? The following is Dr. Wolfe's abstract of the history of the operation:—

In September, 1875, I published in the *British Medical Journal* a successful case of the formation of a new lower eyelid; and on April 7, 1876, eight months after the operation, I exhibited to the Glasgow Medico-Chirurgical Society this same case, and an additional one of eight days' standing which was published in the *Medical Times and Gazette*, June 3, 1876, after we had an opportunity of satisfying ourselves of its successful issue. 2. Dr. Wadsworth, of Boston, U.S., has sent me a report of a successful case of my operation, which he brought before the Ophthalmological Congress in New York, in September, 1876. 3. In your own *Beiträge für Praktische Augenheilkunde* (page 97) you report a successful case of "Blepharoplastik" without pedicle, in which the graft was two inches long, which did not shrink after three months. 4. There is the above-mentioned case of Dr. Martin. 5. Thanks to your valuable journal, which brings me in communication with the ophthalmic work done all over the world, the December number, which has just been published, contains a report of two cases of forming two upper eyelids by Dr. Aub, of Cincinnati, from skin taken from the upper arm, prepared according to my method, which proved successful. Only in one case, where a ligature was used, there was suppuration confined to the place of the suture; but in every other respect, both from a cosmetic and functional point of view, it was satisfactory. 6. I must also mention the three cases of Professor Zehender. I have again studied carefully the report of the respected and learned Professor on the subject; but after studying his publications I am quite satisfied that he has no reasonable complaint to bring against the operation. His first case was a boy of weakly constitution, who suffered from disease of the bones and chronic bronchitis, with several scrofulous fistulous openings in the eyelid dependent on caries of the orbital bones, and who ultimately died of basilar meningitis. Secondly: His next case was the formation of an upper eyelid from a flap taken from the arm in a man forty-four years of age. This patient was so much excited by the chloroform that suffocative symptoms set in; and the excitement lasted so long, even after he was put to bed, that he violently tore away the dressings, catgut sutures, and everything, and on the following morning the flap was found pushed out of its place; *and yet this case did not prove an absolute failure.* The third case was almost successful, but the flap somewhat shrank in its dimensions.

In comparing his interpretation of the principles which I laid down with regard to this operation, and his manner of carrying out these principles, I was very much astonished that, whilst in his first paper he gave a very exact description of the principles laid down by me, in every one of his operations he has introduced an element of failure. He either put stitches into the flap, and sewed the eyelids together with catgut sutures, which ulcerated through on the following day; or changed the dressings twice in twenty-four hours; or left the whole concern quite unprotected, in order to watch the results of the operation; or covered it up with Listerian preparations. In short, he killed his flap either by ligatures or exposure, or by constantly worrying it with fresh dressings and Listerian preparations. I cannot allow this opportunity to pass without saying how much I consider ophthalmological science owes to you for preventing antisepticism, that modern type of orthodoxy, from creeping into our practice. I am by no means opposed to the antiseptic treatment of wounds; indeed, years before Lister published his valuable observations, I wrote in favour of the use of phenic acid as a preventative of hospitalism; and I think that eminent and energetic surgeon, who systematised the method, who crossed seas and visited continents to propagate his doctrine, deserves well of mankind. I am grateful to him, if only that he has been the means of purifying some hospitals from poisonous exhalations as thick as the London or Glasgow fogs. These are services which are not to be lightly spoken of. But it appears to me that the system is so much mixed up with personality and party strife as to choke the germ of truth which it contains. It is not our department to discuss its applicability, but one thing is certain, that its importation into ophthalmic surgery can only be calculated to do mischief. When one Parisian oculist, in presence of his students, washes his flaps in a carbolic acid lotion, and shoves carbolic ointment into a suppurating cornea to kill bacteria, and dips his cataract-knife into an acid solution (to blunt the edge, I suppose),—and other honoured members of our profession operate on cataract to the tune of the playing of the bellows, to frighten away the animalcules in the air,—I consider the incisive remarks of the *Centralblatt* on this species of "Schwärmerei" are seasonable indeed.

Now to return to our subject. I do not expect that this operation will prove in every case successful. Indeed, I had one case where both upper and lower eyelids, in an old man of sixty, were charred; in this case the skin was taken from the forearm of his son. One eyelid proved successful, and the other completely failed. Considering the short period which has elapsed since I introduced the operation to the profession, and the favourable reports received from different countries, I think it is deserving of proper cultivation.

A "SPEEDY METHOD" IN ASPHYXIA.

The following "method," it is believed, will be found a highly valuable, if not the most important, addition to our list of appliances in the asphyxia of children, and also for the relief of that condition in the adult when properly manipulated. The procedure is easy of accomplishment, and requires no preliminary arrangement or preparation for its application, but may be put in execution the moment the condition of the child may demand it. It is as follows Bring the ulnar sides of the hands near together, with the palmar surfaces looking vertically, and place them beneath the back of the infant, so that the extended thumbs may aid, as far as possible, in sustaining the vertex and inferior extremities; then, keeping the ulnar borders near together, so as to form a fulcrum, the radial borders or sides are simultaneously depressed to as great extent as practical—say forty-five degrees—below the horizontal line, and then gradually pronated or elevated to as many degrees above that line, thus facilitating the escape of air drawn into the lungs during the downward movement of the head and chest. Or the hands are placed as at first, and passed beneath the body of the child, on its back and the superior and inferior extremities furthest from the operator seized, one by each hand, near the trunk—the ulnar borders of the hands and wrists forming the fulcrum—the head of the child being kept at a proper axis with the movements of the chest by the hands of an assistant; and the depression and elevation of the head and lower extremities proceeded with as already described. These alternate depressions and elevations of the two extremities, performed in a regular and gentle manner, and repeated at proper intervals, seldom fail in establishing respiration where it is possible of accomplishment. The occasional dashing of cold water on the epigastrium during the descent of the head and chest will hasten respiration where the first few movements fail in its establishment. It is important that the head be kept, as far as practicable, from too much lateral movement, and not permitted to depart considerably from its antero-posterior axis with the vertebral column during the continuance of th process. To this end, in a critical case, the hands of assistant may be brought into requisition. The imp of these remarks will be apparent to intelligent r

a moment's reflection. No impediment should be permitted in the way of free entrance of air into the lungs during the downward movement of the head; and it is scarcely less important that no obstruction should oppose the escape of air during the upward movement of the head and chest. A nurse or other intelligent attendant can be made to understand the movements, so as to continue them should the condition of the mother demand the attention of the accoucheur. These movements will apply to the treatment of asphyxiated persons of any age, as has been practically demonstrated in several cases since the publication of my first article on the subject. Asphyxia from drowning has been promptly overcome in three instances since the question was asked in a former communication, on theoretical grounds, whether it would not act more promptly than any other method. It has been found that the "movements" are easily practised when the body is taken from the water and placed on its back across a barrel, trunk of a fallen tree, or other substance. Two persons can thus depress and elevate the extremities as often as necessary to expand and exhaust the air in the lungs, as in normal respiration.—*Dr. Harvey L. Byrd, in the "Baltimore Practitioner."*

FROM ABROAD.

Professor Zeissl on the Treatment of Gonorrhœa.

(*Concluded from page* 189.)

3. *Indirect Treatment of Gonorrhœa.*—It often happens that local means do not alone suffice in the treatment of chronic gonorrhœa, and then we have to supplement these by the use of medicinal substances acting through the digestive passages. Most of the substances thus employed, when introduced into the digestive organs, are excreted in the urine, and in this way act curatively on the gonorrhœa. Amongst those which are especially active in this way may be mentioned the balsams of copaiba and Peru, cubeb pepper, oil of turpentine, gurian balsam, and matico. Recently the kava-kava or ava-ava has been strongly recommended for the treatment of acute and chronic gonorrhœa, but it has not succeeded in Prof. Zeissl's hands. On the other hand, preparations of iron have proved very efficacious. As to the question, when should these substances be commenced? a general rule can scarcely be laid down. In hospital practice, when the patient can be closely watched, recourse to them need be had but comparatively rarely; but in private practice the case is different. Patients wishing to pursue their occupations often neglect the injections for a whole day, or they perform them so unskilfully that not a drop of the fluid enters the urethra. Under such circumstances we must have recourse to internal medicines. But it is also often observed that after continuing injections for days the discharge does not diminish, and continues very thin; while after the employment of some of the above-named substances for some time it lessens in quantity and acquires consistence. The opinion is frequently expressed that the employment of these resinous substances, especially copaiba, may give rise to albuminuria, but Prof. Zeissl has never met with an instacne in the thousands of cases which he has treated by resinous substances. The opinion has indeed arisen through ignorance of chemistry. It has been observed that, on the addition of nitric acid to the urine of a person who has employed these medicines, a white precipitate is produced. But this precipitate is again dissolved by boiling, which is not the case with a precipitate of albumen produced by nitric acid. Or if we boil the urine, slightly acidulated with acetic acid, or apply Hoppe-Seyler's sensitive test, no trace of albumen is seen to exist. Weikart's and Prof. Zeissl's experiments have shown that it is not the ethereal oil but uric acid that is precipitated by the nitric acid. These resinous bodies sometimes give rise to a form of urticaria (U. balsamica), but this soon disappears on discontinuing the remedy. The following formulæ are recommended by Prof. Zeissl:—1. Matico in capsules (fifteen a day); 2. Ethereal extract of cubebs and spirit of turpentine, equal parts, made into a pill-mass with magnesia usta, of which twenty-four pills weighing each 35 centigrammes should be taken daily; 3. Copaiba 15 or 20 drops three times a day in capsules; 4. White wax 5 grammes melted by a gentle heat, balsam copaiba 15 grammes, magnesia 9 grammes, to make a pill-mass, eight pills of 30 centigrammes three times a day. Balsam of Peru, turpentine, and similar substances may be given in the same way. 5. Of preparations of iron, a teaspoonful may be given five times a day of a mixture containing 1½ parts of the liquor ferri, 150 of water, and 25 of syrup of raspberries; or 1 gramme of saccharated carbonate rubbed up with 3 grammes of sugar may be divided into ten powders, of which three are given daily. Prof. Zeissl has given a fair trial to an infusion of the kava-kava root, which is in fact the *Piper methysticum*, but has found it completely useless.

As already observed, not unfrequently neither the direct nor indirect treatment succeeds in effecting a cure, and then we have to resort to the use of bougies and sounds; the cause of this prolonged duration of the affection being the implication of the prostate. As Thompson remarks, most practitioners in treating gonorrhœa pay too little attention to the disease of the prostate which may be consequent upon this. Prostatitis in its acute form indeed is rarely overlooked, on account of the severe suffering that attends it. Very severe pains are felt in the perineal region, especially on walking or when sitting, while a sensation is perceived as if the rectum were obstructed by a foreign body, and the passage of the fæces and of the urine is rendered difficult. On examination by the rectum the prostate is found swollen and very sensitive; and if the inflammation goes on unchecked, in from the eighth to the twelfth day suppuration takes place. Generally the abscess so formed discharges itself, and usually during the ejaculation consequent upon a lascivious dream. If, however, there is violent pain with high fever and evident fluctuation, an incision must be made through the rectum for the discharge of the pus; but although Prof. Zeissl has had many cases in which this operation has been performed with the best results, yet he has never recourse to it except in the extremest need, as there is always danger of the healing process being impeded by the passage of the fæces. In very rare cases the prostatic abscess is discharged through the perineum, and a urinary fistula may then be the result.

Chronic inflammation is, however, a far more frequent occurrence than acute prostatitis. The symptoms in both forms are similar, except that the accompanying febrile action is more of the synochal type in acute, and more of the intermittent type in chronic prostatitis. The patients complain of a dull sensation in the perineum, especially when standing or walking, as also of pains in the sacral region and along the posterior parts of the thighs. The urine contains epithelial cells mingled with pus corpuscles and prostatic secretion. On examination by the rectum, the prostate is seldom found enlarged, but it is more or less sensitive to strong pressure. A patient in this condition may employ injections, and even those which contain a pulverulent deposit, for months, and yet not be completely cured. As already stated, such a case must be treated by the elastic bougie, or better still by means of a solid instrument. Choosing one corresponding to the size of the orifice of the urethra, we find, supposing there be no stricture present, that we can pass it without obstacle on to the prostatic portion of the urethra. Arrived here, we are unable to pass into the bladder unless we employ considerable force—which is always to be avoided. An instrument of three or four numbers less will pass without difficulty into the bladder, causing during its passage through the prostatic portion not only the stabbing pain always felt on gliding over the caput gallinaginis; but also a severe burning sensation along the entire prostatic portion. After the first introduction of a solid instrument there usually issue from the urethra one or more drops of a viscid fluid mingled with blood-serum, and which is nothing else than the prostatic secretion combined with a little blood derived from the hyperæmic prostate. An instrument must be passed daily for several days, and after the second or third introduction a larger one will pass easily into the bladder. One rule should be observed in cases in which the passage is not effected easily over the prostate into the bladder—viz., to greatly depress the instrument, when it will easily slip into the bladder. It is always preferable for beginners to employ a metallic catheter rather than a sound, as it is a source of great satisfaction to them to see the

urine flow from the bladder, and not remain in painful doubt, during the four or five minutes the instrument ought to remain, whether it is actually in the bladder or has made a false passage. If this procedure be continued for some days, the patient observes, sometimes by day, but much oftener at night during sleep, that there is a considerable quantity of a viscous fluid discharged from the urethra, unaccompanied by lascivious dreams or erections, and which leaves a sharply defined grey spot on his linen. This is a sign that the chronic prostatitis has come to an end. After each introduction of the instrument either some water or a very dilute solution of a metallic salt should be injected, in order to wash away any of the oil which may have become detached from the sound, as this induces a rather sharp burning sensation in the urethra.

By this mode of treatment a chronic gonorrhœa which has often persisted for years is cured in a comparatively short time. The secretion which appears at the mouth of the urethra in this affection arises not only from the small diseased spots of the urethra still uncovered by epithelium, but also at least in part from the prostate. By the introduction of the sound a sharper irritation is excited in the portions of the mucous membrane of the urethra suffering from chronic catarrh, and the moderately swollen prostate is at the same time submitted to compression, and in this way the symptoms which characterise chronic urethral catarrh are brought to an end. In Prof. Zeissl's opinion, chronic gonorrhœa never exists without a moderate tumefaction of the prostate, which, however, is not always perceptible to the sense of touch. In confirmation of the correctness of this view, it is to be observed that individuals who have very frequently had gonorrhœa, or in whom gonorrhœa has persisted for a long period, are the subjects of a considerable enlargement of the prostate in their thirty-fifth year, and often even younger. This hypertrophy is the result of the hyperæmic condition which the prostatic portion of the urethra and the prostate itself are in during the existence of chronic gonorrhœa; and we all know that an organ to which for a long time a very large supply of blood is conveyed becomes hypertrophied.

Doctors' Bills.

The *New York Medical Record* commences the new year by some remarks on doctors' bills, which are as applicable to the Old as to the New Country:—

"In footing up the accounts of the old year the practitioner of medicine learns many lessons from humanity. Fortunate is he if, in the estimate of the amount from bills receivable, he is able to realise the payment of anything like what he had been led to expect at the time of rendering the services. Willingness to pay the doctor is too often narrowed to that short period when the grateful patient can focus his pocket-book through his tears. In looking over the items in his day-book, the physician can now recollect when was the favourable opportunity for receiving the fee, and how he missed it. Then, any sum would not have been too great to pay him for the relief of pain or the actual saving of life. The doctor smiles now as he thinks of the pretensions of his grateful patient, and verifies afresh the forgetfulness of impetuous gratitude. The man who then would have no other attendant, now apparently feels so many obligations to the one who once saved his life, and whom now he owes, that he does not wish to trouble him any more. His readiness to pay at the time he thought his wife was dying, or when his Harry was snatched from the jaws of death, has vanished into the shadowy uncertainties of a more convenient season, and he now comforts his conscience that, after all, it was nothing more than an ordinary service, and the doctor can wait for his money. It would not be proper, of course, for the doctor to consult his own convenience in answering the call. Suffering humanity demands immediate attendance. Sleep, meals, family obligations, and social recreation must be sacrificed to it, and the attendant must be content if, in the majority of cases, he can earn for himself the reputation of being obliging to his patrons and attentive to his business.

"When we descend from the lofty conceptions of professional obligations to the more material element of pecuniary remuneration, our poetry degenerates into the common prose of grocers' and butchers' bills. We are speaking now of the patients who ought to pay, but who do not; also of men who believe, if they ever intend to remunerate the doctor at all, that his bill must be the last on their list. In one sense it is flattering to imagine that the medical profession is above the want of money, that it performs the duties of its high mission without being subject to the temptations of ordinary mortals. Viewed from other standpoints, the outlook is not encouraging to one who feels that he ought to live by his profession, and be decently compensated for his work.

"To return to the relations of gushing thankfulness to actual pay—what a sorry lesson does the man of experience learn in studying them! We almost imagine him to be cold-hearted when, unmoved, he listens to the tearful acknowledgments of Jones when Johnny is out of danger; to the outpourings of generous sentiments by Mrs. Black when Crœsus Black, Esq., is again restored to health. Nor must the younger practitioner believe his elder brother to be unthinking or profane if, when long after the bill is due, he hears him humming Rabelais' couplet concerning the sick devil who thought of becoming a monk. When the young man's ledger is four or five years old, and he refreshes his memory concerning promises of patients unfulfilled, he too will become a trifle suspicious, and learn to sympathise with his seniors. It has often been said, even by those who are disposed to pay everyone else promptly, that physicians should never be in a hurry for their money. Really it would seem that the services of the doctor are placed even below those of the plumber in regard to the time and willingness for payment. On the other hand, it is well known that in the majority of cases the longer the bill is deferred after the thankful, appreciative, or tearful period, the less the chances are of getting it at all. And physicians themselves are in a great measure to blame for this. They have educated people to be tardy in their payments by showing an indifference as to the time when accounts should be rendered. What they look upon as a small matter with themselves, is being considered as such by their patrons. Then, again, so much medical service is rendered gratuitously that it is hard to convince some people that it is worth anything. The system of 'dead-heading' (gratuitous work) for clinical, dispensary, and hospital material has developed itself into a science which is now better understood by the patient than by the doctor. When so much of this is going on, the patient with an elastic conscience can easily excuse himself from any obligation, pecuniary or otherwise, to his physician. The latter may consequently book what he pleases, and collect what he can. It is fair to suppose, taking all the chances into account, that fully one-third of his visits will have been made for nought; and if he collects the remainder of what is due to him within a reasonable period, he will be more fortunate than the majority of his brethren who are now settling up the accounts of the year."

Death from Chloroform.—The *Boston Med. Journal* (January 15) furnishes the following account of a death from chloroform:—"G. A. N., aged twenty, a mechanic, of St. Johnsbury, Vermont, desired to have several teeth extracted. He was examined by a competent physician, and his heart and lungs were found in good condition. On December 26 he inhaled ether for one hour without the desired effect. On the 30th, chloroform was inhaled from a napkin with a paper funnel; pulse 80, and regular; action of heart and lungs good. Patient soon went kindly under the influence of the vapour, and one tooth was extracted. Sensibility partially returning, the mouth was cleansed, more chloroform administered, and two teeth extracted. Sensibility again partially returned, and another tooth was extracted, *without* more chloroform. The patient then began to struggle and exhibit signs of pain. His head was brought forward, and his mouth well cleansed. He was then returned to his former position, when he suddenly threw up his arms, rolled up his eyes, and ceased to breathe. He was instantly placed in an inverted position, his tongue drawn forward, and artificial respiration applied. The heart still continued beating, yet there was no pulsation at the wrist; face very livid, and no natural respiration. The heart continued to act very feebly and irregularly until forty-five minutes after breathing had ceased. Efforts were continued, until at the end of one hour the patient was pronounced dead. Artificial respiration, inversion of body, electricity, iced water, and all other known remedies were faithfully employed. Amount of chloroform used, three ounces by weight. No post-mortem."

REVIEWS.

A Handbook of the Theory and Practice of Medicine. By Frederick T. Roberts, M.D., B.Sc. Lond., F.R.C.P. Lond., Professor of Materia Medica and Therapeutics at University College; Physician to University College Hospital; Assistant-Physician to Brompton Hospital for Consumption and Diseases of the Chest. Fourth Edition. Vol. II. London: H. K. Lewis, Gower-street. 1880.

We have much pleasure in noticing the appearance of a fourth edition of this valuable work. It has been again thoroughly revised by the author so as to keep it well up with advancement of knowledge. Special attention has been given to the chapters relating to the absorbent system and the nervous system; and in all points the manual retains its high character as one of the best works of the kind in the English language.

The Heart and its Diseases, with their Treatment: including the Gouty Heart. By J. Milner Fothergill, M.D., M.R.C.P. Lond., Assistant-Physician to the West London Hospital, and to the City of London Hospital for Diseases of the Chest. Second Edition (entirely re-written), with plates and illustrations. London: H. K. Lewis, Gower-street, W.C. 1879. Pp. 516.

This book, though called a second edition, is in fact a new work, the first edition having been entirely re-written and greatly enlarged; and Dr. Fothergill has called to his aid several known workers in various subjects. Thus, the account of the evolution of the heart is written by Mr. Alban Doran; the section on the use of the sphygmograph is from the pen of Dr. Balthazar Foster; Mr. Knowsley Thornton has contributed some pages on displacement of the heart from abdominal pressure; and the account of ulcerative endocarditis is abridged from Von Dusch; and writers of all countries are very freely quoted from or referred to. In saying this, however, we would not be understood, for a moment, as wishing to convey the idea that the work is a mere compilation. Far from it: for the treatise is an original as well as an able one; and it contains much valuable clinical and therapeutical information, and what we may call clinical pathology, expressed now and then in a manner that may by some be thought too dogmatic and positive. Dr. Fothergill insists very earnestly, and rightly, on the high value and importance of rest in acute affections of the heart. In his chapter on acute endocarditis he says, "the inflammatory storm which passes over the endocardium lights up a growth of connective-tissue corpuscles in the fibrous structure of the valves, and in the chordæ tendineæ, even to their muscular attachments. The growth of connective-tissue corpuscles is lessened by rest, is increased by activity. The more the strain on the mitral valves and their attachments, the greater the development of connective-tissue corpuscles in them after an acute attack of endocarditis. . . . . It is this growth and its subsequent contraction, which distorts and mutilates the valves, which we fear. If the growth could be arrested the subsequent injury could be limited." And then he remarks, "It is sad to think how, with the pathological facts of acute endocarditis and its sequelæ before them, authority after authority has gone on basing their claim to our professional confidence on the short time—the few days—which elapse before their patients can sit up or be discharged from the hospital. Surely this is the most pernicious thing that could happen—the thing, indeed, most conducive to future trouble." And again, in the chapter on the treatment of organic disease of the heart, the same point is dwelt upon. "It is enough," the author says, "to make one despair of the reasoning powers of the species to see how the lessons of pathology have been forgotten and disregarded by all writers—the writer not excepted in the first edition—in their management of endocarditis. Even in the elaborate work of Dr. Sibson the plan of rest is only followed out during the period of the acute symptoms. Yet physiological rest, or the nearest practicable approach to it, is as necessary for an inflamed valve as for a sprained ankle," and so on. There is unquestionably some need for all these warnings of the danger of early exertion, but we venture to say that Dr. Fothergill has exaggerated, not a little, the shortcomings of practitioners, at any rate, in this respect; and as he has himself, since his first edition, arrived at a fuller possession of reasoning power, let us hope that other writers also may develope in a like manner. The chapter on "The Neurosal Affections of the Heart," the substance of which, in the shape of lectures, appeared in our columns in 1878, is interesting and good, and contains much information that practitioners will find very useful. The chapter on "Gouty Heart" is the most original part of the whole book, perhaps, and may be strongly recommended. The gradual development of gout-disease is graphically described. After speaking of the extent to which "county families" are affected, Dr. Fothergill says that in consequence of the great afflux of wealth in the great manufacturing counties of Lancashire and Yorkshire, gout is becoming very common in the third generation of the successful manufacturer. "The grandfather lived well, and died old, without ever having a touch of gout, unless it was in the muscular pains which he called 'rheumatics.' The father lived well, probably knew nothing of doctors; swore at his rheumatism occasionally; had winter bronchitis; and died of aortic disease. The present representative of the family has attacks of articular gout, a great toe that occupies a good deal of his attention, and thickened knuckles—indeed, full-blown gout. We are truly passing through a gouty phase of disease; partly the result of affluence, partly the consequence of the habits of the Regency."

The book is handsomely brought out, and the illustrations are very good. The style is here and there rather gossipy; there is a good deal of repetition, and we have noticed some careless blemishes which may easily be avoided in the next edition—thus, Dr. Dickinson is always spoken of as Dr. Dickenson. But the work is a valuable one, and may be read with much profit.

The Medical Profession in the Three Kingdoms in 1879. The Essay to which was awarded the Second Carmichael Prize. By Thomas Laffan, Physician to the Cashel Union and Fever Hospitals. Dublin: Fannin and Co., Grafton-street. London: Longmans and Co.; Baillière, Tindal, and Cox. Edinburgh: Maclachlan and Stewart. 1879.

For this essay the sum of £100 was awarded last year by the Council of the Royal College of Surgeons of Ireland. A short time ago we noticed Mr. Rivington's essay, which gained the First Carmichael Prize in the same year. That occupied close upon 500 pages, large octavo, while the one now before us takes up only 218. Both show a great amount of labour and industry in compilation; and each is strongly coloured by the individual opinions of its writer, which are not always in agreement. Thus, if we have read aright, Mr. Laffan looks upon conjoint examinations and uniformity "with entire disfavour," while Mr. Rivington considers them to be the great desiderata. The two essays cover, necessarily, the same general ground; but Mr. Laffan has touched upon two subjects, neither of which were noticed, we think, in the fuller essay of Mr. Rivington—viz., the abuse of testimonials—an evil which he rightly denounces in strong terms; and "Our Medical Journals." For these Mr. Laffan has nothing but praise, and his praise is enthusiastic. "These journals," he cries, "are to our profession some of her chief instruments of good. They are almost her eyes, her hands, her soul itself. They have contributed more to its advancement, and to the benefit of humanity, than almost any instrument of progress that we could name." We feel much flattered, and hope we shall not be thought very ungrateful if we venture to suggest that to spend £300 once in every few years in inducing a number of medical men to write long essays on the state of the medical profession is rather a waste of the money. We think the Carmichael Essays of 1879 may be very useful as books of reference, and are sure that the time and labour expended on them are poorly repaid by the prizes. But surely a formal description of the state of the profession need not be often published. About once in a quarter of a century would suffice, we should think; and between times the income of the Carmichael Fund might be devoted to some other purpose. We do not know how such a change in the conditions of the trust could be made in Ireland; but in England the Public School Commissioners, the University Commissioners, or some similar body, would soon manage it. We are very rapidly getting rid of any sentimental scruples, or other difficulties, about accepting a man's money for any purpose with definite restrictions, and afterwards altering as we like the conditions of the trust.

PROVINCIAL CORRESPONDENCE.

MANCHESTER.

(From our own Correspondent.)

REFORMS AT THE PENDLEBURY HOSPITAL—THE MEDICO-ETHICAL ASSOCIATION AND DR. HUMPHREYS.

THERE is already evidence that good will result to the Pendlebury Hospital from public attention having been so strongly directed to its pitiful maladministration. It is said—I do not know with what truth—that a prominent member of the House-Committee not long ago signified his intention of bringing the medical profession of Manchester to its knees for its ill-behaviour in signing the memorial to Dr. Humphreys. This intention, if ever seriously expressed, has not hitherto been in any sense fulfilled. Indeed, so far from the memorialists being on their knees, it would almost seem as if the Board of Governors were rapidly assuming that edifying but humble attitude. In the short time that has elapsed since my last letter the Lady Superintendent's resignation has been tendered and accepted; two at least of the lady-nurses have left the Hospital; the whole of the medical staff (I mean, of course, the non-resident staff) have had granted to them, not only seats at the governing board, but *power to vote*, so that it can no longer be said that one member of the staff alone enjoys this power, as has been the case for the last two years; and, further, the office and functions, if not the name, of the Honorary Directing Physician have been swept away, leaving the three acting members of the staff, Dr. Borchardt, Dr. Ashby, and Mr. Thomas Jones, on a footing of perfect equality.

All this is as it should be. It remains for the medical staff to follow up the advantages already gained by insisting upon the entire control of the nursing being placed in their hands. It is an utter anomaly for the medical and nursing authorities to be perpetually in conflict, and the only way to avoid this unseemly spectacle is to put the head of the nursing department into her proper place, and make her responsible to the medical officers, whose instructions she is there to see carried out. Now and then a lady superintendent is found who can use her authority without abusing it, who is superior to the common weaknesses of her sex, and who can rule a large establishment without encouraging tale-bearing, or establishing a system of favouritism amongst her subordinates, or making her special preferences felt even amongst the members of the medical staff. Such an exceptional ruler was Miss Campbell, Miss Lückes' predecessor at Pendlebury, and such is the gifted lady who is at present the head of the nursing department at the new Manchester Union Hospital at Crumpsall. But these exceptions only prove the rule. It is not in accordance with ordinary experience to meet with lady superintendents whom it would be wise to release entirely from medical control, and entrust with a separate authority.

The Committee of the Manchester Medico-Ethical Association is about to summon a special meeting of the members to take into consideration the case of Dr. Humphreys. At this meeting a resolution to the following effect will, it is understood, be submitted by the Committee for adoption, with a view to its being sent at once to Dr. Humphreys: "That this Association, having had its attention called to the action of the authorities of the Pendlebury Hospital in suspending Dr. Humphreys, the Senior Physician to the Hospital, and having carefully considered the statements which have been published in vindication of this action, hereby records its deep sense of the cruelty and injustice of the treatment which Dr. Humphreys has received, and assures him of its sincere sympathy."

THE SALISBURY TREATMENT OF CONSUMPTION.—Dr. Ephraim Cutter has established a small "Home," near Boston, for carrying out the Salisbury treatment of consumption. Dr. Salisbury, we believe, claims to diagnose consumption one year before the development of the usual symptoms and signs. This is done by examining the blood, which in the pre-tuberculous stage contains certain spores and fibrin filaments. The method of cure is by a rigid system of diet, raw meat being a prominent feature of the same.—*New York Med. Record*, December 20.

GENERAL CORRESPONDENCE.

THE MANCHESTER CHILDREN'S HOSPITAL CASE.

LETTER FROM DR. L. BORCHARDT.

[To the Editor of the Medical Times and Gazette.]

SIR,—In your editorial article, "The Manchester Children's Hospital Case," you fire a volley of invectives and accusasations against me, without having good grounds for doing so, and without having an accurate knowledge of the facts on which you base your accusations. I shall not deign to refute your invectives of "disingenuousness," etc.; I shall restrict myself to show that your accusations are unjust. You try to make out a case against me *for the way* in which I interfered "in the interests of Dr. Humphreys and the Hospital," with the assistance of Mr. Thomas Jones. You were led into this error through a misprint in the *British Medical Journal*, by which Mr. Thomas Jones was termed "House-Surgeon at the Children's Hospital," and you make out a serious case against me on this basis. Mr. Thomas Jones, however, is not the House-Surgeon, but the well-known Surgeon to the Hospital, and was the equal of Dr. Humphreys. Your case on this point breaks down. You might have avoided this error by referring to the "Medical Directory."

Your assertion, that by my "own showing and from my present position as for the next twelve months Directing Physician to the Hospital, it is plain that I have acted as something more than an ordinary governor," I do not understand; whether your other readers will be able to understand your meaning I do not know. If you mean that by my interference to prevent the dismissal of a professional brother I have acted as something more than an ordinary governor, I must plead guilty to your accusation. But my resuming my old office on the medical staff for twelve months happened a year after this interference, and has no connexion with this action of mine. In acceding to the request of the Board of Governors, which was made after the resignation of Dr. Humphreys, I had no other intention than to help the Hospital, the medical staff, and the Board of Governors over the existing difficulties.

You are surprised that I stated in one of my letters that "during the last twelve months I never spoke to Dr. Humphreys, I never entered his ward, never looked at a single case under his care." You rightly say that this shows a loose screw; but you are wrong in supposing that I loosened the screw. It was not I, but Dr. Humphreys who did this. In the annual report of the medical staff for 1878, Dr. Humphreys introduced, after the report had been passed by the medical staff, sentences criticising most insultingly my actions as medical officer of the Hospital in the year 1865. I, of course, resented them, and Dr. Humphreys withdrew them and apologised for them. But this action of a colleague who had received nothing from me but kindness and courtesy revealed such ill-feeling on his part against me that I felt compelled to break off all connexion with him.

You blame me for not having answered Dr. Rayne's attacks. The attacks of a man with a grievance, which are based on nothing else than his statement of what different people have said to him privately, are, to my mind, not worth answering. If you differ from me as to the worth of such attacks I shall not dispute your right to do so; but you must in fairness allow me to judge whether, when, and how I think it due to my position and reputation to answer this class of attacks.

I regret with you that in this controversy a degree of personality has been introduced which ought to have been avoided. I am inclined to think that the impartial members of our profession, who have followed the controversy, will do me the justice to say that not I, but the friends of Dr. Humphreys are responsible for it.

I am, &c.,
LOUIS BORCHARDT.

LETTER FROM MR. T. JONES.

[To the Editor of the Medical Times and Gazette.]

SIR,—That portion of your article on the Children's Hospital, Pendlebury, in last Saturday's issue, which has reference to

me is based on an error inadvertently introduced into Dr. Borchardt's first letter.

I have never held the office of House-Surgeon to the Children's Hospital, but as Surgeon have been connected with the institution for a period of six years. Kindly insert this correction, and oblige Yours, &c.,

THOMAS JONES.

96, Mosley-street, Manchester, February 16.

MISUSE OF HOSPITALS.

[To the Editor of the Medical Times and Gazette.]

SIR,—It is not necessary to look beyond your pages this week to see what happens in a hospital where some one or other of the officers can curry favour, so to speak, with the governors at the expense of his colleagues or professional brethren. It is the same in all of them.

Some forty years ago—before I ever thought of holding office myself in a hospital or school—I was requested by some members of committee at one of our county hospitals to call on a gentleman of property residing in the neighbourhood, and to use whatever influence I had with him to increase his subscription, at least to make it equal to that of other persons in his position. He was a friend of my father's; and he heard me with courtesy, pleading for a charitable institution which I thought deserved his support. But he, civilly enough, refused what I asked. He had lived much in the world, and had resided in different parts of England, with opportunities of seeing how hospitals were often managed. He told me that he did not think the hospitals did all the good they were supposed to do, and especially he thought they did not do good to the members of the medical profession. Will your experience allow you to say that his opinion was wrong?

The hospitals to which a school is attached may form an exception. There the medical officers have a bond of union in their common interest in the school, and the rivalry of conflicting practitioners does not become inconvenient; the committee-room is not allowed to be the arena for their jealousies. I am, &c., C. S.

February 16.

THE RECENT DEPUTATION OF THE BRITISH MEDICAL ASSOCIATION TO THE PRESIDENT OF THE LOCAL GOVERNMENT BOARD.

LETTER FROM DR. HAUGHTON.

[To the Editor of the Medical Times and Gazette]

SIR,—In your issue of this day's date you call attention to the rebuff recently received from Mr. Sclater-Booth by certain gentlemen claiming to represent the British Medical Association, in the proposal that "calf lymph" should be substituted for the ordinary vaccine commonly used, and its use made compulsory, or pretty nearly so.

You might have added that the members of that Association were not consulted respecting the so-called deputation; and that, at the late Conference, Mr. Hart, as chairman, declined to allow a resolution to be submitted to them, owing to the difference of judgment already expressed by the various speakers.

Before the Government can even listen to any proposition tending to reverse the existing order of things, very strong reasons must be alleged for the proposed change—and certainly nothing is gained by publicly committing all the members of a great society to a course of which it can hardly be expected that even a majority would approve.

Members of the community in general, upon whom the burden of paying for legislative changes must fall, will also claim to have a voice in a question which has long since been taken out of the list of purely professional subjects. The days of implicit faith have gone by; and the least that will now satisfy the public is a well-authenticated pedigree of all the lymph which they are compelled to use, and a good guarantee that it does not owe its origin to variolous inoculation. The theory that small-pox and vaccinia are identical in nature is new to the public; and, even if true, would only excite prejudice, so that it is abundantly evident that the words of warning which you printed in the year 1871 are strictly applicable to the present situation. Our existing vaccination law has excited the most determined resistance in almost all parts of the country, and cannot be maintained unmodified without bringing contempt upon the magistrates charged with its execution, and upon those members of the medical profession who support it against their own better judgment. I am, &c.,

February 14. EDWD. HAUGHTON, M.D.

STREET MUSIC.

LETTER FROM DR. R. BRIDGES.

[To the Editor of the Medical Times and Gazette.]

SIR,—Many of your readers—professional and others—will be glad to hear that a society is already formed to deal with the nuisance of street organs, German bands, etc. I take the liberty of asking you to give your support to the movement by inserting this letter in your paper. The name of the society is "The Society for the Regulation of Street Music"; Mr. Bass, M.P., is the President; the Secretary is Mr. T. K. Soady; the offices are at No. 32, Piccadilly-circus, where the names of those who are anxious to help should be sent at once, as it is hoped a Bill may be passed this session. So many complaints have been made of late that I hope this notice may be sufficient to obtain the support of the profession. I am, &c., ROBERT BRIDGES, M.B.

Savile Club, Savile-row, February 17.

REPORTS OF SOCIETIES.

THE PATHOLOGICAL SOCIETY.

TUESDAY, FEBRUARY 3.

JONATHAN HUTCHINSON, F.R.C.S., President, in the Chair.

(*Concluded from page* 193.)

LIVING SPECIMEN OF TRUE LEPROSY.

THE PRESIDENT exhibited a boy, aged ten, of English parentage on both sides, who was born in Calcutta, and had lived there for the first six years of his life. When he came to England, four years ago, there was slight duskiness of the skin; but soon there was developed paralysis of the left ulnar nerve, which continues. His skin by-and-by presented the characteristic erythematous dusky appearance of true leprosy in its diffuse form, and patches of numbness could now be detected here and there, as in the left temporal region. The occurrence of the paralysis of the ulnar nerve before the skin became characteristically affected was a point of interest.

FATTY ABDOMINAL TUMOUR, SHOWING FIBROUS AND OSSEOUS CHANGES.

DR. DRESCHFELD (Manchester) exhibited three tumours removed from the abdomen of a female, aged forty-nine. A few years ago she began to observe a hard, painless swelling in the left lumbar region, the exact connexions of which could not be made out. A year ago she again consulted Mr. Heath, of Manchester, complaining now of abdominal tenderness, anorexia, and loss of flesh; and another firm tumour could be felt in the right lumbar region. The patient herself being anxious for their removal, Mr. Heath proceeded to operate, and removed from the abdominal cavity—first, from the left lumbar region the osseous tumour, and afterwards the larger and less firm fibro-fatty mass from the right side. Both tumours when found were distinctly encapsuled, but showed evidences of having been connected with a large fatty mass at the back of the abdomen. The patient died on the fifth day from peritonitis and shock; and post-mortem there was taken out an enormous fatty tumour, weighing 12 lbs., attached to the back of the abdomen. This Mr. Heath had refrained from removing at the operation, and the position of the ligatures he had applied showed that the two smaller tumours must have been originally connected with the large fatty growth. The smallest tumour was of bony structure, and of ivory hardness throughout; and near its point of attachment to the fatty mass several small nodules of bone were found. The second tumour was of larger size, and was partly fatty, partly fibrous in structure. The third large mass was purely fatty. The interest of the specimens was twofold—firstly,

because fatty tumours are of so rare occurrence in the abdominal cavity that in the *Pathological Society's Transactions* only two instances are recorded; and secondly, because so great a transformation of fatty growths is extremely rare, and while their calcification is a common event, true ossification very seldom occurs, and still more rarely is it found that one part of a fatty tumour has become osseous while another has become fibrous. The tumour had probably originally sprung from the serous membrane.

Varicella Gangrenosa.

Dr. Abercrombie exhibited the dead body of a child, which presented on the scalp, face, neck, and upper part of the trunk many circular, depressed, sharply-cut, ulcerated spots about the size of a sixpence or shilling. The child had been admitted into the Great Ormond-street Hospital with a rash like varicella two days before death, when these ulcers were already beginning to form. The child died of pneumonia. Post-mortem there was found a small tubercular ulcer in the small intestine, and some of the mesenteric glands were caseous. A fortnight before the child was admitted, four other children in the same house were certainly suffering from varicella, and a day after its admission another child exhibited the characteristic eruption of that disease. Dr. Dickinson had told the speaker that in all these cases tubercular deposits were found somewhere in the body.

The President remarked that the specimen was of great interest, especially to himself, as completely justifying the epithet, "varicella gangrenosa," he had suggested for such cases. There could be no further proof wanted than was afforded by this case, that such ulcerations occurred in varicella. He had seen many such cases, the diagnosis of which had in some instances been somewhat obscure and doubtful. He had also seen a similar case of what he would call "vaccinia gangrenosa."

Dr. Barlow had seen several examples of such ulceration, and it was only from the President he had been able to get a satisfactory explanation of its occurrence. In the Guy's Hospital Museum there was an excellent model of the condition, labelled "rupia escharotica." In all the cases he had been able to examine post-mortem he had found more or less tubercle, and it was to this that he had at first attributed the gangrenous ulceration. But a recent instance had proved to him that they were cases of varicella. At the affected spots there first appears a bulla, on which a thick scab forms, and under it deep ulceration goes on rapidly, so that in a few days bone may be exposed. The condition is usually fatal.

Congenital Syphilis of the Larynx.

Dr. Felix Semon exhibited two larynges affected by congenital syphilis. They were taken from two brothers, the one five years and nine months old, the other three years and six months, and there was most conclusive evidence, from the history, both of the parents and of the children themselves, that the latter were the subjects of congenital syphilis. Both the brothers, in addition to other syphilitic symptoms, had suffered from laryngeal trouble from the end of the first month of life. The carelessness of the parents made treatment very irregular. The eldest child died after suffering from great dyspnœa for five days. The upper aperture of the larynx was found chronically thickened, ulceration being quite limited, and it was to an increase of this chronic thickening (rather than to acute œdema) that death was to be attributed. The younger child died within three weeks after his brother's death, the fatal event being in this case due to acute œdema of the middle compartment of the larynx, which was almost completely occluded, while the upper outlet was only slightly affected. The speaker remarked that deep lesions of the larynx are very rare in congenital syphilis; and that simple chronic thickening, in particular, was very rare even in adults, and had not before been observed in children. It was noteworthy that the larynx should have been specially attacked by the syphilis in these two brothers, and that both should have died at so nearly the same time from laryngeal thickening and œdema.

The following were exhibited by card:—

By Mr. Hulke—Five Drawings of Cancer.

By Mr. Nettleship—1. Microscopic specimens of Optic Nerve from a case of Optic Neuritis, with good sight. 2. Microscopic specimens showing Atrophy of Optic Nerve and Retina, and other changes in an eye lost by erysipelas spreading to the orbit.

CLINICAL SOCIETY OF LONDON.

Friday, February 13.

E. H. Greenhow, M.D., President, in the Chair.

Case of Traumatic Salivary Fistula cured by passing a Fine Catgut Bougie from the Mouth along Stenson's Duct.

Mr. Henry Morris read notes of this case, as follows:—A shoemaker came under my care in the Middlesex Hospital on June 24, 1879, for bleeding from several incised wounds, one of which was about two inches long, and vertical in direction, along the right cheek. On June 28 saliva was seen trickling from the lower end of this wound, which was all but healed. The patient now stated that since the injury the right side of the mouth had felt very hot and dry, and that he had constantly to moisten it by carrying the fluid from the left side over to the right of his mouth. A fine catgut bougie was introduced at the oral aperture of the duct, and passed onwards towards the parotid gland until it emerged on the cheek through the fistula. The newly-healed wound was laid open, and the proximal end of the injured salivary duct searched for, and found by squeezing the parotid gland until a little saliva was forced out of the duct. Into this the point of the bougie was inserted and pushed onwards for about half an inch. The edges of the wound were brought together with three hare-lip pins and twisted sutures, and the bougie cut short, so that a short end, not long enough to be caught between the molar teeth, was left protruding into the mouth from the slit-like orifice of the duct. The patient at once appreciated a marked difference in the feeling of the right side of the mouth, which was now in all respects like the other side, and he could distinctly feel saliva trickling into it. On July 4 the bougie came away accidentally. The wound on the cheek had been all but healed for four days, but a little discharge still escaped at its lower end. On July 9 a little saliva was escaping still; cotton-wool and collodion were therefore continued over the wound until July 15. By this date the wound was securely healed, and all the saliva flowed freely into the mouth. The man was retained in hospital for a few days longer, and was then discharged well. The facility with which a bougie can be passed along the parotid duct from the mouth encouraged the author to think that the same treatment would prove successful in most cases of parotid salivary fistula, meaning by "salivary fistula" a fistula of the parotid duct as distinct from a fistulous communication with the parotid gland itself, such as occasionally follows abscess below or behind the ear; and also as distinct from an opening into the cavity of the mouth, such as sometimes occurs after necrosis of the jaw, and in cancer. If the orifice of the duct, which is its smallest part, becomes obstructed after long disease, the mucous membrane of the cheek may be punctured, and then a bougie might be passed into the dilated part of the duct, which is just where it pierces the buccinator muscle, and urged along it beyond the fistulous opening. In operations for the removal of tumours of the face, when an incision must be made so as to divide the duct, it would be well to pass a parotid bougie whilst the patient is still under chloroform, so that the patency of the duct and the flow of saliva into the mouth might be secured during and after the healing of the wound.

Sutural Union of Median Nerve in the lower part of Forearm, Five Weeks after its Division, followed by Return of Function.

Mr. J. W. Hulke related this case. A bottle-washer, by the bursting of a seltzer-water bottle, received a deep gash across the front of forearm, just above the wrist, which severed the median nerve, the radial artery, and several tendons. Five weeks later, on July 23, there having been no return of nerve function, the nerve was exposed by dissection. The ends were found three-quarters of an inch apart, the upper bulbous, the lower pointed. Enough was

cut off each end to get plain surfaces at 90° to long axis of nerve. The upper end was pulled down in order to lengthen it, and the ends were brought together by four stitches of very fine silk passed through the sheath; the forearm and hand were fixed on a splint. On August 15 he was discharged; sensibility had returned in the parts before numb, except the last phalanges of index and middle fingers. Later, further improvement took place.

Mr. Howard Marsh said there had been a similar case at St. Bartholomew's Hospital, which he hoped would soon be reported to the Society. The nerve had been injured for some time, but after bringing its ends together its function began to return within twenty-four hours.

Mr. Hulke, in reply to a question by Mr. Marsh, said the nerve had been stretched in pulling down, and that he used a particularly fine silk suture, called three-ply China twist, which he had got from Pearsall's, in Cheapside.

The President remarked that the case was of interest to the physician as illustrating the fact that pain always returned after simple section of a nerve for its relief.

Case of Disturbed Nutrition, with Suppuration and Exfoliation of the Nails.

Dr. A. Sangster read a paper as above. E. K., aged seven, came under observation October 16, 1879. There was a history of "chest complaints" on the mother's side. The mother looked healthy; she had had seven children, three of whom had "lumps in the throat"; three died in infancy. The patient was a delicate-looking little girl. Her mother brought her to the hospital for the affection of the nails and ulcerative stomatitis. The terminal phalanx of the middle finger of the left hand was about twice its natural size, hot, red, and very painful, so that the child held the finger with the other hand in a vertical position, to keep it from being jarred. The nail was greenish-black, curved talon-wise, and raised from its bed, from which oozed a very fœtid purulent discharge. The skin in the immediate neighbourhood was ulcerating. The other nails showed changes. Some were ridged transversely, and discoloured at the distal portions; others were stunted and misshapen, evidently new nails; some were separated from their beds half-way towards the fold. A piece of paper could be slipped beneath them, showing that there was no massing of epidermis between the nail and its bed. The separated portion of the nail was blackened with dirt, but its texture was unaltered. The toe-nails had been stunted and misshapen for some time; none had suppurated. The mother's statement was, that the finger-nails presented no unusual appearance until twelve months ago, when certain of those on the right hand gradually turned black (presumably by separation from their beds and discolouration). When the blackened portion reached the fold, the finger-ends festered, and the nails were shed. Some of the nails of the left hand, not corresponding with those affected on the right, underwent similar changes. There were no signs of syphilis in the patient or other members of the family (the father was not seen); no history of dartrous affection (psoriasis, eczema, etc.); no traumatic cause for the disease was discoverable; no fungus could be found; appearances were in favour of the correctness of the mother's statement. The disease seemed to consist essentially in a separation of the nail from its bed; the onychia condition being possibly due to accumulated dirt, most probably in some instances to the contagion of pus.

Removal of Myeloid Tumour of the Radius by Excision.

Mr. Morris exhibited a patient, whose case is described in the tenth volume of the *Clinical Society's Transactions*, from whom he removed a large myeloid tumour of the radius by excising that bone from the wrist to the insertion of the supinator brevis, together with the lower four inches of the ulna. He brought her under the notice of the Society as an encouragement to surgeons to excise rather than amputate for such growth of the bones of the upper extremity. It was now four years since the operation, and yet there was no sign of recurrence of the disease. The degree of usefulness of the hand thus preserved to the patient was very considerable. By the aid of a simple leather splint she was able to nurse, dress, and wash her children, do all her household work, wash linen, and carve her own and her children's food. She could also stitch and darn, and was able to take up a pin from off a table between her index and middle fingers, and pin her shawl together. Without her splint, since the contraction of the soft tissues between the hand and the end of the bones of the forearm had taken place, she was able, without support, to hold her hand out straight from the elbow. Mr. Morris remarked that before the operation he determined to remove a considerable part of the ulna, so as to avoid the great and permanent abduction which must have resulted if the lower end of that bone had been left untouched; and that at the time of the operation he found that, owing to the firm adhesions between the tumour and the outer side of the ulna, he would have been obliged to remove the lower part of that bone if he had not so predetermined. His only regret now was that he had not taken away as much of the ulna as of the radius, for the retraction of the hand had been so great that the lower end of the remaining ulna slightly overlapped the back of the carpus, and gave rise to some friction between the splint and the skin covering the bone, almost to the extent of forming a subcutaneous bursa. Indeed, for a time he thought a bursa had been formed, but this appearance had subsided of late. It would be admitted, he was sure, by any surgeon who examined the limb, that so far from being useless or an incumbrance, it was a very useful and serviceable member; and such was the conviction of the patient herself.

(*To be continued.*)

OBITUARY.

WILLIAM HAGARTY O'LEARY, F.R.C.S.I., M.P.

We regret to announce the death, after a very short illness, of Dr. O'Leary, member of Parliament for the borough of Drogheda. Rapid pneumonia was the cause of his unexpected, almost sudden, decease, which took place in London on Sunday last, February 15. Dr. O'Leary was born in 1839, so that he was in his forty-first year at the time of his death. He was admitted a member of the medical profession some eighteen years ago, and after a time was appointed Lecturer on Anatomy and Physiology in the Ledwich School of Medicine, Peter-street, Dublin. In 1871 he became a Fellow of the Royal College of Surgeons in Ireland. About this time Dr. O'Leary obtained considerable notoriety by his evidence in the case of Talbot, the police-constable who was murdered in Dublin, in July, 1871, and by the advice he gave, or was believed to have given, in the management of the defence of the man tried for the murder. He at once became most popular with a certain class of politicians and of the public in Ireland; and one result was his election in the Home Rule interest as member of Parliament for the borough of Drogheda at the general election of 1874. To his credit it must be said that Dr. O'Leary was always a most useful member of the House of Commons, and on all occasions was ready and willing to lend a helping hand to his professional brethren in Parliamentary business. His loss will be much felt in many quarters. By his death a Surgeoncy to St. Vincent's Hospital, Dublin, and an Examinership in the Royal College of Surgeons, Ireland, become vacant.

RICHARD RAINSFORD, M.B. Univ. Dub., F.R.C.S.I.

We greatly regret to have to record that on Tuesday, the 17th inst., Mr. Richard Rainsford died, after a long and distressing illness, at his residence, 2, Merrion-square West, Dublin. Three years have not elapsed since Mr. Henry Wilson, the able and well-known oculist and Mr. Rainsford's senior colleague at St. Mark's Ophthalmic Hospital, died of pneumonia in the same house. After Mr. Wilson's death, Mr. Rainsford moved to his house from Harcourt-street, where he had himself previously resided, and everything seemed to promise for him a long and prosperous career. Soon, however, symptoms of psoas abscess, connected apparently with a previously existing empyema, developed themselves, and he fell into bad health, which seriously interfered with, and ultimately put a stop to, his professional work.

Mr. Rainsford was a graduate in Arts of the University of Dublin, and took there also the degrees of Bachelor of Medicine and Master of Surgery in the year 1869. He subsequently proceeded to Vienna, where he pursued his studies

for some time. In 1874 he became a Licentiate and Fellow of the Royal College of Surgeons in Ireland. Having adopted ophthalmic and aural surgery as his speciality, he was fortunate enough to be elected Assistant-Surgeon to St. Mark's Ophthalmic Hospital, to which institution he became full Surgeon on the death of Sir William Wilde in 1876. A year later, on Mr. Wilson's death, Mr. Rainsford was appointed Senior Surgeon to the same Hospital. He was also Ophthalmic and Aural Surgeon to the Adelaide Hospital, Lecturer on Ophthalmic and Aural Surgery in the Ledwich School of Medicine, Surgeon-Oculist to the National Institution for the Blind, Leeson-park, Dublin; and Aural Surgeon to the Claremont Institution for the Deaf and Dumb, Glasnevin, near Dublin.

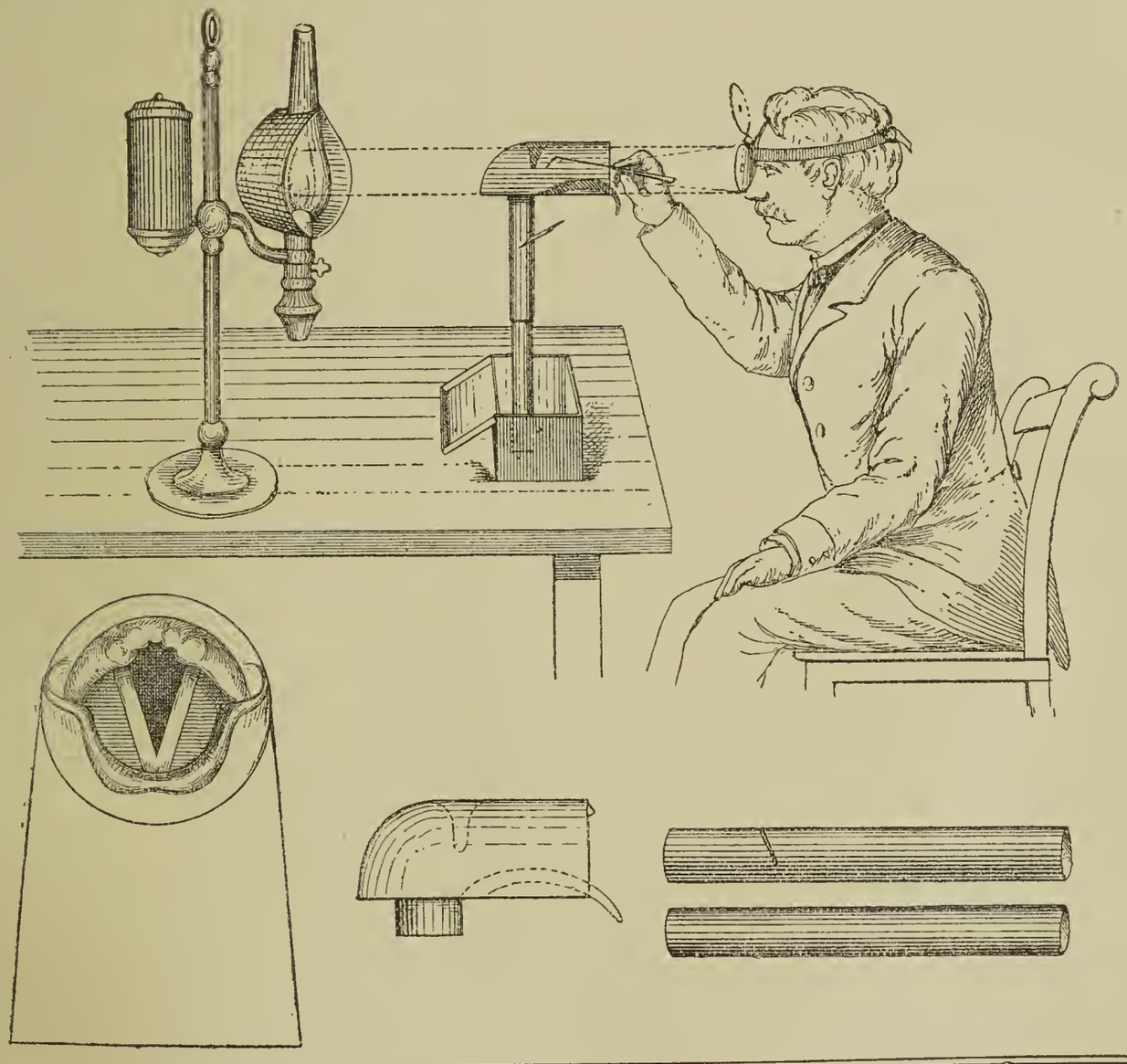
NEW INVENTIONS AND IMPROVEMENTS.

THE LARYNGO-PHANTOM.

The accompanying illustrations are intended to demonstrate the Laryngo-Phantom, an apparatus devised by Dr. Isenschmid, of Münich, and intended to familiarise medical students and practitioners with as many of the details connected with the use of the laryngoscope as it is possible to learn before the application of the instrument to the living subject.

The object intended to be served by the apparatus is a most laudable one, for it will supply a means of constant practice, whereby the many tiresome difficulties of adjustment for different views of the larynx may be in great measure surmounted before the practitioner is called upon to use the laryngoscope on a fidgety patient. It will also be useful for purely physiological purposes.

The phantom consists of three parts: First, there is a mouth of thin metal with tongue and uvula made of red velvet. This is fixed on a laryngeal tube of metal which has a slit by which the various painted images of different views of, and different conditions of, the laryngeal tract can be introduced. This laryngeal tube is movable on a second tube, which is tightly fixed on a peg in the midst of a small box in which the whole apparatus can be packed. The anatomical dimensions are taken from nature. When in use the phantom is placed like the head of a patient who is going to be examined, one or two feet in front of the lamp, but aside from it, so that the rays coming from the lamp and passing the right ear of the patient on to the mirror, fixed at the forehead of the observer, are reflected into the mouth of the patient. The apparatus is sold, we believe, by Messrs. Krohne and Sesemann, of 8, Duke-street, Manchester-square, W.



At the annual meeting of the governors of St. Mark's Hospital, Dr. F. de Havilland Hall was unanimously elected as Honorary Physician in the room of the late Dr. Leared.

Home Life in Japan.—At a meeting of the Nipon (Japan) Institute, on the 26th inst., at 4.30 p.m., in the hall of the Society of Arts, Adelphi (Dr. B. W. Richardson in the chair), Mr. Proundes will give a lecture on the above subject. The domestic and sanitary, as well as the social life of the Japanese people, will be fully described.

The Levée.—The following medical men were presented at the levée held by His Royal Highness the Prince of Wales at Buckingham Palace, on Tuesday, the 17th inst.:—Surgeon H. E. F. Cross, R.N.; Surgeon-Major W. Finden, Indian Medical Department, on return from Afghanistan; Dr. Laking, Dr. W. Little, Surgeon-General Ross, C.I.E. Bengal Army; Fleet-Surgeon R. R. Siccáma, R.N., Surgeon-Major F. B. Scott, and Surgeon W. Williams.

MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen were admitted Licentiates on Feb. 16:—

Baker, William James, Millbrook, Southampton.
Paddle, James Isaac, University Hospital, W.C.
Shears, Charles Hartley Bedwell, St. Bartholomew's Hospital, E.C.
Stokes, Henry Fraser, 21, Compton-terrace, N.
Weed, Theodore Arthur, M.D., Wooster, 449, Strand, W.C.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At the usual monthly examinations for the licences of the College, held on Monday, Tuesday, Wednesday, and Thursday, February 9, 10, 11, and 12, the following candidates were successful:—

For the licence to practise Medicine—

Allman, Robert.
Fisher, George Edward.
Hayes, John Joseph.
Lyle, Robert Charles.
McCoy, Michael Joseph.
MacDowel, Benjamin George.
Marshall, Mary Adamson.
Miller, John Alexander.
O'Donovan, Jeremiah.
Palmer, Walter Stephen.
Taylor, Thomas Cathcart.

For the licence to practise Midwifery—

Allman, Robert.
Alvares, Nicolas Santana.
Fisher, George Edward.
Hayes, John Joseph.
McCoy, Michael Joseph.
Marshall, Mary Adamson.
O'Donovan, Jeremiah.
Sharpe, Alexander.
Taylor, Thomas Cathcart.
Williams, John A. de Courcy.

For the licence as Midwife and Nurse-tender—

Bonfield, Henrietta.
Grail, Helen.
McCance, Cecilia.

APOTHECARIES' HALL, LONDON.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, February 12:—

Battiss, William Sullivan, London Hospital.
Ensor, Theodore Francis, Milborne-Port, Somerset.
Finch, Alfred, Blackheath, S.E.
Jones, Robert, Easteddefa, North Wales.
Knight, George Henry, Wimbledon.
Rygate, David John, 126, Cannon-street-road, E.
Walker, William Frederic, Saltoun-road, Brixton.
Wall, George Braithwaite, Bickerstaffe, Ormskirk.

The following gentleman also on the same day passed his Primary Professional Examination:—

York, Thomas Hutton, Queen's Hospital, Birmingham.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to all new Appointments that take place.

COBBOLD, C. S. W., M.D., L.R.C.P., M.R.C.S.—Assistant Medical Officer to the (Female Department) Colney Hatch Asylum.

DYER, T. B., M.D., M.R.C.S.—Superintendent to the Darenth Asylum.

ELLIOT, G. S., M.R.C.P., F.R.C.S.—Superintendent to the Caterham Asylum.

FORBES, D., M.A., M.B., L.R.C.S.—Assistant Medical Officer to the Workhouse, Brownlow-hill, Liverpool.

GEORGE, W. H., L.R.C.P., L.F.P.S.—Assistant Medical Officer to the (Female Department) Colney Hatch Asylum.

KITCHENER, T., M.D., M.R.C.S.—Physician to the Southern Dispensary, Bath.

STEELE, W. C., M.R.C.S., L.R.C.P., L.S.A.—House-Surgeon to the Huntingdon County Hospital.

WATSON, C. S., M.B., C.M. Edin., M.R.C.S.—House-Physician to the Bristol Royal Infirmary.

WRIGHT, HERBERT ELLISTON, M.R.C.S., L.R.C.P., L.S.A.—House-Surgeon to the Bootle Borough Hospital.

BIRTHS.

BANTOCK.—On February 12, at 12, Granville-place, Portman-square, the wife of Granville Bantock, M.D., of a daughter.

CAMERON.—On February 12, at 2, Charlton-villas, Harlesden, N.W., the wife of Charles H. H. Cameron, L.R.C.P. Lond., M.R.C.S. Eng., of a daughter.

ELLIOT.—On February 10, at Cliffe House, Ruyton XI. Towns, Salop, the wife of Henry Francis Elliot, F.R.C.S., of a daughter.

EWART.—On February 9, at 21, Rubislaw-terrace, Aberdeen, the wife of Professor J. Cossar Ewart, M.D., of a daughter.

FENTON.—On February 15, at Macquarie House, Ealing, the wife of Frederick E. Fenton, L.R.C.P., of a son.

HARDWICKE.—On February 13, at South-terrace, Rotherham, the wife of W. Wright Hardwicke, L.R.C.P., of twins, son and daughter.

JARVIS.—On February 5, at Southwick, Sussex, the wife of N. H. Jarvis, M.R.C.S., of a son.

PARNELL.—On February 15, at St. Norman's, London-road, Forest-hill, S.E., the wife of Gerald Crécy Parnell, M.R.C.S., of a son.

TURTLE.—On February 17, at 35, High-street, Homerton, the wife of James H. Turtle, M.D., of a daughter.

MARRIAGES.

FINLAY—WALSH.—On February 12, at Monkstown, William Finlay, L.K.Q.C.P., A.M.D., to Charlotte E. Walsh, stepdaughter of John E. Moffatt, Deputy Surgeon-General A.M.D.

ROBINSON—WEAVER.—On February 12, at South Lambeth, William M. Robinson, Esq., to Beatrice, second daughter of Loraine Weaver, M.D., of Clapham-road, S.W.

DEATHS.

ALLEN, CAROLINE, wife of Robert Marshall Allen, M.D., Deputy Inspector-General of Hospitals H.M. Army, at Welbourn Hall, Grantham, Lincolnshire, on February 9.

ARMITAGE, REGINALD LEES, son of S. H. Armitage, M.D., of 12, North Audley-street, Grosvenor-square, W., at Calcutta, on January 16, aged 17.

BANNER, SAMUEL, M.R.C.S., at 11, Delamere-street, Westbourne-square, W., on February 16, aged 71.

BERRYMAN, JOHN PENBERTHY, M.R.C.S., at St. Austell, on February 14, aged 55.

CLIFTON, ELIZA, wife of A. C. Clifton, M.D., M.R.C.S., at 65, Abington-street, Northampton, on February 14, aged 55.

GODFREY, FRANCIS, Surgeon-General Madras Army (retired), at 14, Grosvenor-place, Bath, on February 11, in his 84th year.

HALL, A. R., Surgeon-Major, at Malta, on February 4.

KEITH, ALEXANDER CROMBIE, M.B., Surgeon Army Medical Department, at Cabul, Afghanistan, on January 14.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BURY ST. EDMUNDS FRIENDLY SOCIETIES' MEDICAL ASSOCIATION.—Resident Medical Officer. The successful candidate will be required to dispense medicines occasionally, and to undertake not to engage in private practice. Applications, stating age, etc., accompanied with testimonials, to be sent to Mr. J. Claydon, 9, Orchard-terrace, Bury St. Edmunds, on or before February 23.

DISTRICT INFIRMARY, ASHTON-UNDER-LYNE.—House-Surgeon. Candidates must possess recognised medical and surgical diplomas. Applications, with testimonials, to be sent to the President, Hugh Mason, Esq., Ashton-under-Lyne, not later than February 25.

GREAT YARMOUTH HOSPITAL.—House-Surgeon. Candidates must be unmarried and duly registered to practise medicine and surgery. Applications, with testimonials, to be sent to R. R. B. Norman, Esq., Hon. Secretary, on or before March 18.

LEITH HOSPITAL.—Assistant-Surgeon. Applications, with testimonials, to be sent to the Secretary, Mr. G. V. Mann, 33, Bernard-street, Leith, from whom further particulars can be obtained, on or before March 10.

LIVERPOOL NORTHERN HOSPITAL.—Assistant House-Surgeon. Candidates must possess medical and surgical qualifications from one or more British colleges or institutions recognised under the Medical Act. Applications, with testimonials, to be sent to the Chairman of the Committee not later than February 28.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, QUEEN-SQUARE, BLOOMSBURY.—Resident Medical Officer. Candidates must be duly qualified in medicine and surgery. Applications, with copies of testimonials, to be sent to B. Burford Rawlings, Esq., Secretary, on or before February 21.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Belford Union.—Mr. Charles Clarke has resigned the East District: area 12,727; population 2700; salary £25 per annum. Mr. James Miller has resigned the Workhouse and the West District: Workhouse—salary £10 per annum; West District—area 23,402, population 3140, salary £15 per annum.

Drayton Union.—Mr. Edward Thurlow Prior has resigned the Fifth District: area 11,201; population 2438; salary £21 per annum.

Lincoln Union.—Mr. T. M. Wilkinson has resigned the Second District: area 15,560; population 2154; salary £20 per annum. Also the Eleventh District: area 9528; population 2226; salary £20 per annum.

APPOINTMENTS.

St. Matthew's (Bethnal-green) Parish.—Edward Berdoe, L.R.C.S. Edin., M.R.C.S. Eng., L.S.A., to the First District.

Stockbridge, Union.—Walter King Loveless, M.R.C.S., L.R.C.P., and L.M. Edin., to the Stockbridge District and the Workhouse.

THE DISPOSAL OF THE SEWAGE OF FINCHLEY.—The Finchley Local Board of Health last week held a special meeting to consider the question of the disposal of the sewage of the district. It had been proposed to have recourse to irrigation, and for this purpose a piece of land had been selected, close to the Marylebone Cemetery at Finchley. The Board's surveyor, upon the present occasion, brought up his report as to the suitability of the ground for this purpose, and an estimate of the expense which would have to be incurred. The latter was calculated at over £11,000, and as the general opinion of the members of the Board was that the surveyor's report was, on the whole, unfavourable to the adoption of this mode of disposing of the sewage, various other schemes were proposed and discussed, and it was also suggested that the co-operation of the adjoining parishes of Hendon and Friern Barnet should, if possible, be obtained.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—Bacon.

Beta, Stoke, Devonport.—We have received your letter, but it goes a little further than is advisable for many reasons, the more especially as you do not wish your name to be attached to it. The point, however, shall not be overlooked.

Archæologist.—They were all physicians to George the Third. The following epigram on them is an example of the advantage of rhyme, the wit lying in the metrical form, and in the form only:—

"The King employed three doctors daily—
Willis, Heberden, and Baillie—
All exceedingly skilful men,
Baillie, Willis, and Heberden;
But doubtful which most sure to kill is,
Baillie, Heberden, or Willis."

F.R.C.S. Eng.—Chirurgical lectures were given at the Royal College of Physicians in 1682. The Marquis of Dorchester was made a Fellow of the College in 1680.

H. F. S.—In 1606 Roman Catholics were prohibited in England by statute "from practising physic or exercising the trade of apothecaries."

M.D., Kingston, Canada.—The advertisement of Dr. J. Young, of Kingston, who professes to cure consumption, worms, etc., by means of his "Indian Rose Pad," should be forwarded to the Secretary of the Royal College of Surgeons, of which institution he was admitted a member in 1841. Your subscription has been received, and our publishers will remit the back numbers in the manner indicated by you; the others will be sent by post.

H. F. S.—The fee for taking up the freedom of the Company of Apothecaries, if by servitude is only £2 3s. 6d.; the same by purchase is one hundred guineas. Write to the Clerk.

A London Member.—Due notice will be given of Professor Flower's course of lectures.

W. W., Brompton.—The subscriptions at the recent annual dinner in aid of the funds of the French Hospital, Lisle-stret, amounted to about £2000.

Factory Inspection, Prussia.—The following details show the success and satisfactory results of factory inspection in Prussia:—At Berlin thirty-three factories have ceased to employ children, and in the remainder there are only nine under fourteen years of age. In nearly all the provinces the same good results have been attained, especially in the district of Frankfort-on-the-Oder, where in the 330 cloth factories, employing 14,000 hands, there are now only 1500 minors, this being a decrease of 23 per cent. since 1876; while in the districts of Cologne, Coblenz, and Trèves the total number of children employed has fallen from 5334 to 4237, and of these all but sixty-one are over fourteen years of age. Wiesbaden and Düsseldorf are the exceptional districts in which there is any increase, and in the latter the addition, it is stated, is really due to the stricter accuracy of the statistics taken last year. The inspectors are vigilantly careful that proper sanitary arrangements are provided, and the employers willingly adopt all the precautions suggested against accidents to their workpeople.

Inquisitive.—The usual fee for London medical men lecturing in different parts of the kingdom, to classes formed under the St. John Ambulance Society—in which work several are engaged just now—is one guinea, in addition to their travelling expenses. It is simply an honorarium in recognition of their services.

Life in Whitechapel.—The terrible condition of the teeming poor in districts of the East-end of London continues, it appears, to form a very unsatisfactory portion of the sanitary inspectors' reports. A recent report to the Whitechapel District Board of Works called attention to the unhealthy and dilapidated condition of dwellings in the courts south of Royal Mint-street: they were described as filthy; in some cases there was no water-supply, and in others the water flowed over, and the yard was flooded from the defective state of the drains. A separate family occupied every room, and some of the rooms were overcrowded. In the discussion which ensued, the Metropolitan Board of Works was considered responsible for this condition of affairs, and a copy of the sanitary inspector's report was ordered to be sent to that Board.

Official Sensitiveness.—Dr. Corner, Medical Officer of Health for Mile-end Old Town, in his published report states, *inter alia*—"Making every allowance for congenital diseases, defects, and low vital powers from various causes, there must still be some remediable, but not yet remedied cause—and for which we can conclude that the 'powers that be' are greatly responsible—for this great sacrifice of young and, doubtless, in the large majority of instances, vigorous life." At a recent meeting of the Mile-end Old Town Vestry, exception, in severely expressed terms, was taken to this remark of the Doctor's. One vestryman complained that it was "a reflection upon the Vestry as one of the powers that be, which was not justified." The Doctor replied "that his remark applied generally; and he should have thought that that would have been obvious to most intelligent people, who would admit that perfection in regard to measures affecting the public health was not yet attained." After a little further discussion the subject was dropped.

A Wholesome Evening's Amusement.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—It is no easy matter to find suitable occupation and amusement for a patient with a weak, excitable nervous system. The very worst plan of all is to cut him off from all kinds of pleasant excitement, and yet how can he be allowed to go to the evening theatres with their heat and glare and overcrowding? London does possess, however, means of amusing such an unfortunate. There are now afternoon performances at most of the best theatres and at the opera, and we can testify to the fact that many of them are thoroughly satisfactory from a medical point of view. Perhaps the best of all these performances, in its way, is Mr. and Mrs. German Reed's entertainment at St. George's Hall, which provokes just that amount of dramatic excitement and of musical interest which is desirable in the chronic nervous invalid. Such amusement exercises the mind to a moderate degree and in a happy direction, and is sure to prove beneficial.

I am, &c., INVALID.

Prince Leopold.—His Royal Highness has consented to become the patron of St. Agatha's Convalescent Home for Invalid Children at Beckenham, and has given a donation of ten guineas to the institution.

The Gilbert Blane Medals.—The sum of £300 was left by Sir Gilbert Blane in 1830, to be invested in Three per Cents., in the name of the College of Surgeons, for the purpose of awarding two gold medals every other year to naval surgeons whose reports should be adjudged to be the best.

L. F. H., Norfolk.—The number of coroners in counties in England and Wales was 233; the number in boroughs was 99. Of the 233 county coroners, 175 are elected by the freeholders, and 58 by lords of manors and various officials and dignitaries of that description. The borough coroners are elected for the most part by the town councils. In three instances the mayor of the borough is, *ex officio*, the coroner.

Weather Forecasts.—It appears from the reports of the Meteorological Council of the Royal Society, for the year ending March 31 last, that the Council feel themselves unable to express any definite opinion as to the success of the daily forecasts. They recognise an increasing interest in them by the public, and intimate that as the reports on which the forecasts are based are collected from a larger number of stations, the efficiency of the service will be greatly promoted.

Tricks of Milk-dealers' Servants.—Large milk-sellers and dairy companies are, it appears, constantly discovering that their servants of both sexes surreptitiously (if the opportunity occurs on their rounds for delivering milk) add water to the contents of the can with the view to peculation. The milk when it leaves their depôts is pure as it is received from the country. It is stated that in consequence of these frauds one of the London dairy companies has attempted, or is about to do so, the issuing of the milk in small and closely sealed bottles, any tampering with which by the *employé* will be readily detected.

Noteworthy.—Attention has been called by a Parisian engineer to the fact that, in the most intense cold, the sewage-water has always remained considerably above freezing-point. While the Seine was mostly frozen the right bank below the sewer continued perfectly free.

The late Mr. Robert Baker, C.B.—The deceased, who was lately one of the Chief Inspectors of Factories, died on the 6th inst. at Milverton, Leamington, in his seventy-seventh year. He was a member of the medical profession, and had given special attention to the condition of the factory operatives, and was instrumental in bringing about factory legislation. He was appointed Sub-Inspector of Factories in 1824, and Chief Inspector in 1858. On his retirement her Majesty conferred upon him the distinction of C.B. of the Civil Division.

Brook Pollution.—The Metropolitan Board of Works have obtained an injunction in Vice-Chancellor Hall's Court to restrain the London and North-Western Railway Company from conveying the drainage of some cottages at Acton into the Stamford Brook. To give the defendants time to provide a new drainage system for the cottages the order was suspended for six months.

"*A Crying Shame.*"—At the annual meeting recently held, of one of the oldest provident dispensaries in Brighton, the abuse of the medical charities was specially referred to. One governor, Dr. Withers Moore, observed that they stood face to face with the fact that one-third of the population of the town received medical assistance gratuitously. It was a crying shame, that ladies and gentlemen who drove about in their carriages should, whenever their servants fell ill, expect educated gentlemen to attend them for nothing, just making them paupers; they might with equal justice expect the baker to send them bread for nothing. Similar sentiments were expressed by other speakers, it being the opinion that the medical charities of the town were appealed to by many who were in a position to pay for professional assistance.

COMMUNICATIONS have been received from—

The Registrar of Apothecaries' Hall, London; Dr. Wolfe, Glasgow; Dr. Edward Haughton, London; Dr. W. J. Franch, St. Kitts; Dr. Edward Ballard, Local Government Board; Mr. Thos. Jones, Manchester; The Secretary of the Nipon Institute; Mr. G. H. Page, Dublin; The Secretary of the St. Mark's Hospital; Dr. Henry Ashby, Manchester; Messrs. Fletcher and Fletcher, London; Dr. Octavius Sturges, London; The Honorary Secretaries of the Society of Medical Officers of Health; The Honorary Secretary of the Medical Society of London; Mr. J. Chatto, London; The Hon. Secretary of the Royal Medical and Chirurgical Society; Mr. T. M. Stone, London; Dr. Edward I. Sparks, Mentone; The Honorary Secretary of the Quekett Microscopical Club; Dr. Handfield Jones, London; Mr. B. M. Mitchell, Newport; Dr. Louis Borchardt, Fallowfield, Manchester; Messrs. Bates,

HENDY, AND CO., London; Mr. E. L. HUSSEY; THE REGISTRAR OF THE ROYAL COLLEGE OF PHYSICIANS, London; Dr. FRED. TAYLOR, London; THE SECRETARY OF THE ROYAL INSTITUTION; BETA; THE REGISTRAR-GENERAL, Edinburgh; Dr. R. BRIDGE, London; Mr. C. J. CULLINGWORTH, Manchester; Dr. J. M. BRUCE, London; Dr. J. W. MOORE, Dublin; THE SECRETARY OF THE CLINICAL SOCIETY, London; THE SECRETARY OF THE PARKES MUSEUM OF HYGIENE; Mr. G. A. CARDEN, Cheltenham; Dr. J. ARLIDGE, Stoke-upon-Trent; Mr. R. W. PARKER, London; THE SECRETARY OF THE STATISTICAL SOCIETY, London.

BOOKS AND PAMPHLETS RECEIVED—

On some Substitutes for Alcohol in the Treatment of Fevers, by Francis Vacher, F.R.C.S.—On Common Lodging-house Accommodation, by Francis Vacher, F.R.C.S.—A Manual of Minor Surgery and Bandaging, by Christopher Heath, F.R.C.S.—New Commercial Plants, by Thomas Christy, F.L.S.—Medicinal Plants, parts 38 to 42, by Robert Bentley, F.L.S., and Henry Trimen, M.B., F.L.S.—Chirurgie Antiseptique, Dr. Just Lucas-Championnière—Report for January, 1880, Medical Officer of Health—Extracts from the Examiner—Lectures on Animal Development, by E. A. Schäfer, F.R.S.—Sessional Proceedings of the National Association for the Promotion of Social Science, vol. xiii., No. 2—Quarterly Return of the Births, Deaths, and Marriages registered in Scotland, Quarter ending December 31, 1879.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Centralblatt für die Medicinischen Wissenschaften—Gazette Hebdomadaire—Louisville Medical News—Nature—Revue Médicale—El Siglo Medico—Galveston Medical Journal—Weekly Return of Births and Deaths—Rivista de Medicina—Boston Medical and Surgical Journal—Birmingham Daily Post, February 12—Occasional Notes—Missouri Dental Journal—Archives of Medicine—College and Clinical Record—Guy's Hospital Gazette—Michigan Medical News—Philadelphia Medical Times—Echo, February 13—Detroit Lancet—Centralblatt für Gynäkologie—Therapeutic Gazette—St. Louis Courier of Medicine—Students' Journal and Hospital Gazette—Obstetrical Journal—Revue d'Hygiène—New York Medical Journal—Canadian Journal of Medical Science.

APPOINTMENTS FOR THE WEEK.

February 21. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

ROYAL INSTITUTION, 3 p.m. Prof. Pauer, "Joseph Haydn" (with Musical Illustrations).

23. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

MEDICAL SOCIETY OF LONDON, 8½ p.m. Dr. Thorowgood, "On Suppressed Gout." Dr. Corfield, "Leaves from a Sanitary Note-Book." Mr. Dewar, "On a Case of Jaundice."

24. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 8½ p.m. Dr. Vandyke Carter, "On the Experimental Pathology of 'Spirillum Fever.'" Dr. Alfred Sangster, "On the Non-Glandular Theory of the Origin of Molluscum Contagiosum."

ROYAL INSTITUTION, 3 p.m. Prof. Schäfer, "Physiology of Muscle."

25. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Lister), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.; National Orthopædic, Great Portland-street, 10 a.m.

26. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

ROYAL INSTITUTION, 3 p.m. Prof. Dewar, "Recent Chemical Progress."

27. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

CLINICAL SOCIETY, 8½ p.m. Mr. Teevan, "On a Case of Retention of Urine from Impacted Urethral Calculus: Relieved by Pushing the Stone back into the Bladder and Crushing it." Dr. Buzzard, "On a Case of Paraplegia from Pott's Disease treated by Sayre's Splint; Intestinal Obstruction; Death from a Kick in the Duodenum." Dr. Buzzard, "On a Case of Rapid and almost Universal Paralysis, involving the Four Extremities, Both Sides of the Face, Respiration, and Deglutition; Recovery." Dr. Sangster, "On a Case of Molluscum Fibrosum." Dr. Greenhow, "On a Case of Typhoid Fever, with Acute Nephritis and Profuse Hæmaturia."

QUEKETT MICROSCOPICAL CLUB (University College), 8 p.m. Dr. T. Spencer Cobbold, "On Human and Canine Filariæ." Dr. S. Marsh, jun., "On Bleaching and Washing Microscopical Sections."

ROYAL INSTITUTION, 9 p.m. Mr. F. J. Bramwell, "Sequel to the *Thunderer* Gun Explosion."

VITAL STATISTICS OF LONDON.

Week ending Saturday, February 14, 1880.

BIRTHS.

Births of Boys, 1369; Girls, 1332; Total, 2701.
Corrected average in the 10 years 1870-79, 2659·8.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	1188	1307	2495
Average of the ten years 1870-79, corrected to increased population	883·0	881·6	1764·6
Deaths of people aged 80 and upwards ...	...	...	109

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa
West	561359	5	3	6	3	26	1	...	...	5
North ...	751729	...	3	8	3	52	...	4	...	5
Central ...	334369	1	1	2	2	25	...	1	...	...
East	639111	...	5	14	2	23	...	3	...	1
South	967692	6	11	26	3	68	2	7	1	8
Total	3254260	12	23	56	13	197	3	15	1	19

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·549 in.
Mean temperature	40·6°
Highest point of thermometer	51·6°
Lowest point of thermometer	31·7°
Mean dew-point temperature	36·7°
General direction of wind	S.W. & S.
Whole amount of rain in the week	0·61 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, Feb. 14, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1880.*	Persons to an Acre. (1880.)	Births Registered during the week ending Feb. 14.	Deaths Registered during the week ending Jan. 14.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3664149	48·6	2701	2495	51·6	31·7	40·6	4·78	0·61	1·55
Brighton	107321	45·6	40	41	48·0	32·3	40·3	4·61	0·38	0·97
Portsmouth ...	134224	29·9	82	52	...	...	...	...	...	...
Norwich	85827	11·5	47	40	48·0	34·5	40·3	4·61	0·39	0·99
Plymouth	74993	53·8	43	44	50·8	34·0	42·9	6·06	0·65	1·65
Bristol	213536	48·0	129	101	51·3	33·5	41·7	5·39	0·77	1·96
Wolverhampton ...	75970	22·4	53	37	47·5	28·5	38·3	3·50	0·46	1·17
Birmingham ...	394738	47·0	330	175	...	...	...	...	...	...
Leicester	129912	40·6	88	49	...	...	...	...	...	...
Nottingham ...	173627	17·4	98	104	50·7	29·6	40·3	4·61	0·54	1·37
Liverpool	544056	104·4	429	312	...	...	...	...	...	...
Manchester ...	363130	84·6	273	182	...	...	...	...	...	...
Salford	185786	35·9	146	91	...	...	...	...	...	...
Oldham	115413	24·7	60	51	...	...	...	...	...	...
Bradford	197196	27·3	112	98	49·6	30·9	39·4	4·11	0·78	1·98
Leeds	318929	14·8	205	118	48·0	31·0	39·3	4·06	0·35	0·89
Sheffield	304938	15·5	184	125	49·7	28·9	39·9	4·39	0·76	1·93
Hull	149627	41·2	100	76	...	...	...	...	...	...
Sunderland ...	116730	42·2	79	50	53·0	32·0	41·6	5·34	0·54	1·37
Newcastle-on-Tyne	149366	27·8	104	82	...	...	...	...	...	...
Edinburgh	229839	54·8	122	84	49·5	32·0	39 8	4·34	0·28	0·71
Glasgow	589598	97·7	361	258	50·0	31·3	40·6	4·78	0·59	1·50
Dublin	314666	31·3	225	272	51·8	25·6	39·3	4·06	0·47	1·19
Total of 23 Towns in United Kingdom	8633571	39·2	6011	4937	53·0	25·6	40·3	4·61	0·54	1·37

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·55 in. The lowest reading was 29·00 in. on Monday evening, and the highest 30·06 in. at noon on Friday.

* The figures for the English and Scottish towns (except for Nottingham, Salford, and Oldham) are the numbers enumerated in April, 1871, raised to the middle of 1880 by the addition of nine years and a quarter's increase, calculated at the rate which prevailed between 1861 and 1871. Revised estimates have been adopted for Nottingham, Salford, and Oldham, based upon special returns of inhabited houses existing within those boroughs. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

THE

GULSTONIAN LECTURES ON EPILEPSY.

Delivered before the Royal College of Physicians.

By W. R. GOWERS, M.D., F.R.C.P.,

Assistant-Physician to University College Hospital, Physician to the National Hospital for the Paralysed and Epileptic.

Lecture I.—Part I.

Mr. President and Gentlemen,—The founder of the lectures, the delivery of which for the present year I have the honour of commencing to-day, left certain directions regarding their method and scope, doubtless well known to you. The progress of medical science has, however, rendered strict adherence to those directions scarcely practicable. Two or more diseases were to be discussed, and a body if possible dissected in illustration of them. But the time is long past since the demonstration of a chance "subject" could afford instruction to the Fellows and Members of this College, while our study of disease has become so elaborate that, in the space of three hours, it is impossible to consider more than a few points regarding any one disease.

May we not read "between the lines" of the founder's direction the anticipation that the progress of pathological anatomy would speedily reveal the organic basis of all diseases? Such an anticipation may, when the words were written, have been not unreasonable. Yet, vast as is the progress of pathology—aided as the scalpel is by sciences which, two and a half centuries ago, were undreamed of—the changes which underlie the so-called functional diseases seem almost as far as ever from discovery. The anatomist may search in vain for any evidence of their existence. Even the microscope reveals but traces of their effects, and can detect no indication of their nature. Our knowledge of them has still to be gained chiefly by inductions based on clinical study. In this, as in anatomy, modern science has given us the assistance of fresh methods, for which, if far feebler than those supplied by the microscope or the retort, we may still be grateful. More precise methods of observation and of record, more exact modes of reasoning, have added much to the power and scope of clinical observation. Foremost among these methods is to be placed that of numerical analysis.

These remarks are strictly true of the functional diseases of the nervous system, and of none more so than of those characterised by convulsion, to epilepsy and its congeners. Pathological anatomy and experiment have taught us something of the coarser pathology of convulsion, but for most of our knowledge we are still dependent almost wholly upon clinical observation. How successfully numerical analysis may be applied to the study of convulsive diseases, we have learned from Dr. Reynolds, Dr. Sieveking, and others; and we have all learned, and are glad to be still learning, from Dr. Hughlings-Jackson, how much a minute analysis of individual cases may teach.

I trust, then, that I shall not be departing from the spirit of the founder's directions in taking this class of diseases as the subject of these lectures, and applying to them the methods of numerical analysis on a somewhat larger scale than has been hitherto attempted, and under conditions which may be considered as, at least approximately, those essential for the successful use of this method. I propose to ask your attention to some of the facts presented by a series of cases which have been under my care during the last ten years, mainly at the National Hospital for the Paralysed and Epileptic. The cases have been taken consecutively, without selection; the facts compared have, with few exceptions, been ascertained on a uniform system, and they are I hope, sufficiently numerous to yield trustworthy results.

On some points the conclusions to be mentioned are the same as have been reached by previous investigators from small numbers of cases; on other points they are somewhat different. It is scarcely possible for me to refer, except in a few instances, to the results obtained by other workers in the same field. My excuse for the omission of such reference must be the brief time at my disposal, and the fact that the conclusions I have now to offer are the result of an entirely independent investigation.

The cases, then, which constitute the subject of these lectures are those of which the symptoms consisted in chronic convulsive attacks, not due to organic brain-disease. All cases have been excluded from analysis in which there was any reason to suspect tumour, chronic meningitis, coarse syphilitic or other organic disease, and all cases of convulsions succeeding hemiplegia. All cases of simple hysterical attacks, unattended by distinct loss of consciousness, have also been excluded. The series includes, then, epilepsy proper, epileptiform seizures in which there is no evidence of organic brain-disease, and cases such as it has been of late the custom to designate hystero-epilepsy, which present, with loss of consciousness, convulsive movements consisting of more or less co-ordinated spasm—spasmodic movements of quasi-purposive character, opisthotonos, emprosthotonos, etc. These latter cases form a series from simple hysteria to true epilepsy. The co-ordinated spasm may exist alone, or may be combined with epileptoid phenomena, or with true epileptic symptoms. Hence it is neither practicable nor wsie to attempt to separate these cases entirely from pure epilepsy, and I am satisfied that in almost all published statistics of epilepsy many of them have been included. But I shall endeavour to ascertain how far each conclusion, with regard to the whole series, applies also to each of the two classes taken separately—the epileptic, and those presenting hystero-epileptic or co-ordinated phenomena,—and subsequently to consider what is the relation between the two.

We may at the outset ask, What is the proportion between the cases presenting these two classes of symptoms? Of 1000 cases, in which an opinion reasonably exact could be formed of the nature of the attacks, they were purely epileptic in 815, while hystero-epileptic symptoms were present in 185, or 18½ per cent.

In the present lecture I propose to deal solely with the subject of the causation of these diseases: the influences to which they can be ascribed, and the proportion of cases in which the action of those causes can be traced.

What, in the first place, is the influence of sex? In the total number of cases analysed, 1450, females preponderate over males, nearly in the proportion of 6 to 5. More exactly, the percentage of females is 53·4; of males 46·6; that is, to every 100 males there were 114 females. This is not due to accidental circumstances, for at the hospital in which most of these observations were made, in the cases which do not present convulsion, males preponderate. It may be thought that this excess of females is due to the inclusion of cases of hystero-epilepsy. But this is true only to a small extent. In the cases of pure epilepsy the females are still in excess, amounting to 52 per cent., the males constituting 48 per cent. In the cases presenting hystero-epileptic symptoms, females preponderate to a much larger extent, and are to the males as 2 to 1, 66 per cent. being females, 33 per cent. males.

In most statistics of epilepsy hitherto collected in this country males have preponderated. This is probably due to the inclusion of cases of syphilitic brain disease, which we have only lately learned to separate.

There are few diseases in which heredity is a more important etiological condition The difficulties of the investigation of heredity among the poor are well known. Of all diseases, it is probably true that the results obtained fall short of the actual facts, but the discrepancy is probably less in these affections than in almost any others. The occurrence of fits, or insanity, in any member of a family is generally well known, and there is not the same tendency to conceal the existence of these diseases among the poor as among the rich. The facts ascertained in this inquiry relate to the occurrence, in ancestors or collaterals, of epilepsy, insanity, hysteria, chorea, and certain forms of paralysis—

viz., paraplegia and infantile paralysis. Ordinary hemiplegia was not included, because primarily due to disease of vessels, etc., and not of the nerve-tissues. Habitual drunkenness, however distinctly allied in some cases to neuroses, is too frequent among the poor to make it possible to attribute any significance to its occurrence as an antecedent of epilepsy.

The proportion of cases in which evidence of inheritance is to be traced was found by Echeverria in 300 cases to be 28 per cent., by Dr. Reynolds, from a smaller number, to be 31 per cent. In my own cases the proportion is rather higher. Of 1250 in which the point was carefully investigated, 452, or 36 per cent., presented evidence of neurotic inheritance. There is no difference in the frequeney of inheritance in the two varieties: in each it is nearly 36 per cent.—that is, roughly speaking, of every eight cases of epilepsy, or of hystero-epilepsy, on an average three will present evidence of neurotic heredity and five will not. Inheritance does not affect the two sexes equally. In the cases in which there was no inheritance the males amounted to 48 and the females to 52 per cent., but among those in which the disease was inherited the females constituted 57 and the males only 43 per cent. It seems, therefore, that when there is an inherited taint the females of a family are more likely to suffer than the males. The same fact has been noted by other observers. In examining the mode of inheritance we obtain some light on the origin of this excess.

Of the 450 cases with inheritance the disease came from the mother's side rather more frequently than from the father's, the difference amounting to 4 per cent.—from the father's side in 35 per cent. (146 cases), and from the mother's side in 39 per cent. (175 cases), while it was from both sides in about 5 per cent. (25 cases). The side from which the disease is inherited is not unimportant, for it has a distinct influence on the occurrence of the affection in the two sexes. In the cases in which the disease was inherited from the father's side, males were in excess of the females by about 8 per cent. (76 males to 70 females), which is an excess of 14 per cent. above the average for the whole number (46 per cent. males). Whereas, in the cases in which the disease is inherited from the mother's side, females were in excess by about 14 per cent. (107 to 82). Thus the percentage of the males affected is 22 per cent. greater when the disease is inherited from the father's than when from the mother's side.

The affection of brothers or sisters must be regarded as an indication of an inherited taint, although we may be unable to trace antecedent instances. In these cases, 89 in number, the females are in very large excess—53 females to 36 males; but the total number is probably too small to permit safe generalisation.

We may now see, in part at least, why females preponderate so much more in the cases of inherited disease than when there is no inheritance. First, the inheritance is more frequently from the mother's side than from the father's; and, secondly, when the inheritance is from the mother's side, girls suffer in a much larger proportion than boys.

Of the relatives who suffer, the mother is herself diseased in a much smaller proportion of cases than the father. The father himself was the subject of neurotic disease in 45 per cent. of the cases in which the inheritance was paternal; the mother, in only 35 per cent. of the cases in which the inheritance was maternal.

Of the neurotic diseases which can be traced in the antecedents of epileptics, epilepsy is incomparably the most frequent. A history of epilepsy was obtained in nearly three-quarters of the inherited cases. In rather more than half (240) it existed alone; in 54 it was combined with insanity, in 5 cases with chorea, and in 3 with both insanity and chorea. Insanity occurred in the relatives of about one-third (157) of the inherited cases, and of these it existed alone in two-thirds. Chorea occurred in other relatives in 35 cases, in 24 of which it existed alone; in 5 it was associated with epilepsy, and in 3 with insanity. The forms of paralysis, paraplegia, and infantile palsy, included in the investigation, were not more frequent in the families with other evidence of neurotic tendency than in those who presented no such history. The cases in which an antecedent family history of hysteria was obtained were very few.

Although the mother was herself less frequently affected than the father, the two suffered from epilepsy with equal frequency, and the difference in the frequency of their affection depended upon the fact that the mother suffered from insanity much less frequently than the father. Of 394 cases of inherited epilepsy, the father was epileptic in 45 and the mother in 46 cases; the father was insane in 21 cases, the mother in only 11.

In some cases the family tendency, as evidenced by the number affected, was very strong. In one case no less than fourteen members of the family suffered from epilepsy—the patient's mother and maternal grandmother; her mother's sister and mother's brother's son; four of her own sisters, and five of her sisters' children.

Is epilepsy predisposed to by any other morbid heredity than that indicated by the occurrence of its own allies? Rheumatism and phthisis have both been supposed to favour the occurrence of epilepsy. Regarding rheumatism, apart from the heart-disease which it may cause, I have been able to obtain no evidence in support of the view. The effect of phthisis is very difficult to ascertain. It is certain that the family history of epileptics presents a large proportion of cases of phthisis, but in the opinion of some writers, as Nothnagel, the frequent coincidence is accounted for by the commonness of lung disease. Others, as Echeverria, believe that the frequent association supports the view that there is a causal relation between the two diseases, and Dr. Savage has expressed a similar opinion with regard to insanity. That there is a relationship between the two is suggested strongly by individual cases, as, for instance, one of my patients, who, presenting no evidence of neurotic inheritance, had lost father, mother, and six brothers and sisters from phthisis, she herself, the sole survivor, being epileptic. The statistics which I can offer on this point are unfortunately not very extensive; as far as they go they do not give support to the opinion that there is a relationship between the two diseases. Phthisis was inquired for in 300 cases, and a history of it in parents, grandparents, brothers or sisters, uncles or aunts, was obtained in 108, or 39 per cent. Considering the commonness of phthisis, this does not seem a larger proportion than might have been expected, although I am not aware that there are any statistics which can be taken as the standard of comparison. Moreover, if phthisis has any influence in causing epilepsy, we should expect to find it traceable more frequently in the cases without than in those with neurotic inheritance; but it is not so. Of 214 cases without, and 86 cases with, neurotic inheritance, the proportion of phthisis is just the same—39 per cent. Further, if phthisis exerted any causal influence, we should expect to find the proportion in which a neurotic heredity is traceable smaller when there was a tendency to phthisis than when there was not. This also is not the case. The proportion of inherited cases was rather less in these 300 cases than in the whole 1250, being 28 per cent. The proportion was about the same in the cases with and those without a family history of phthisis, 28 per cent. in the former, and 29 per cent. in the latter. These facts suggest that the association of phthisis and epilepsy is wholly accidental.

In 8 cases the patients were the subjects of well-marked inherited syphilis. In all of these cases the attacks had the aspect of idiopathic epilepsy, cases in which there were symptoms suggestive of local brain-disease being excluded. In only 2 of these cases did the attacks begin in infancy; in all the others they commenced towards the end of or after childhood.

Inquiries were made in a considerable number of cases for consanguinity of parents, but in no instance was it met with.

We may consider next the influence of age on the occurrence of epilepsy as evidenced by the date at which the first fit occurred in the series of 1450 cases. If we take, first, decennial periods, we find that under ten years of age more than one-quarter of the cases commenced, 29 per cent. Between ten and twenty nearly one-half of the total number, 46 per cent., began. In the next decennial period, twenty to thirty, the number falls to a seventh, 15·7 per cent. Between thirty and forty only 6 per cent. began, between forty and fifty only 2 per cent., between fifty and sixty only 1 per cent., and over sixty only one-third per cent. of the total number. Thus just three-quarters (75 per cent.) of the cases commenced under twenty years.

The relation of the cases to age is shown in greater detail in the following table, which presents the annual number of cases commencing in each year:—

Age.	Case.	Age.	Case.
Under 1	78	15	84
1	66	16	84
2	36	17	67
3	36	18	53
4	28	19	44
5	25	20	40
6	31	21	31
7	43	22-29	14-26
8	34	30-39	3-15
9	40	40-49	1- 6
10	54	50-59	1- 3
11	52	62	2
12	71	64	2
13	74	71	1
14	82		

A large number of cases, no less than 12½ per cent. of the whole, commenced during the first three years of life. In this group no cases of simple infantile convulsions are included, only such as, beginning in infancy, continued as chronic epilepsy. There is a difficulty in ascertaining the exact date of commencement in all cases. Of about one-third, all that could be learned was that they began in infancy. In the table these have been distributed through the first three years of life in the same proportion as presented by the two-thirds in which the exact date of commencement could be ascertained. The number of cases is largest in the first year (5½ per cent. of the whole), and falls rapidly to three years of age, and then more slowly until five, when the minimum for the early period of life occurs, only 1·7 per cent. commencing. From this there is a considerable rise at seven, the commencement of the second dentition, then a fall at eight, and from this the numbers increase slowly at nine and ten, rapidly at twelve, until the maximum is reached at fifteen and sixteen, at each of which 84 cases commenced, 5¾ per cent. of the total number. From this period we have a rapid fall to twenty-one, when only 2 per cent. of the whole commenced. During the next eight years the number of cases commencing in each year varied from 26 to 14. Between thirty and forty years the annual number varied between 15 and 3, and between forty and fifty it varied from 1 to 6. Between fifty and sixty the annual number of cases was from 1 to 3. Over sixty, the cases were—2 at sixty-two, 2 at sixty-four, and 1 at seventy-one.

The proportion in which the two sexes suffer varies considerably in the different periods of life. We may compare, first, their affection in the several decennial periods. In the cases commencing under ten years the females exceed the males by 6 per cent. In the second decennium, between ten and twenty, the excess of females amounts to 18 per cent. In the third, between twenty and thirty, there is a great fall, but the excess of females amounts to 12 per cent. Between thirty and forty, the numbers being still smaller, the relation is reversed; the males exceed the females by 16 per cent. Between forty and fifty, with a continued fall in numbers, the excess of males is still greater, amounting to 36 per cent. Between fifty and sixty it reaches 40 per cent., and over sixty males only suffer.

If we examine the several periods of life more minutely, we find that in the cases which commence in the first year of life the females are almost twice as numerous as the males (51 and 27). In the second year the number of females falls considerably, while that of males rises slightly, so that the difference between them is less. During the two following years the numbers fall, until a minimum of each is reached at five years, the females being still in slight excess. At six and seven years a rise occurs, and the number of cases in each sex is, in the latter, nearly the same. From seven to thirteen the earlier relation is reversed; the males are in excess of or equal to the females, with the perhaps accidental exception of the cases commencing at eleven. At twelve—that is, in the thirteenth year of life—the maximum for males is reached, and from this until sixteen there is a slight fall. The maximum for females occurs later than for males. The numbers increase at twelve and thirteen, and then more slowly, until at sixteen the maximum for any year is attained (50 cases), and they are in that year one-third more numerous than the males. During the next five years the numbers in each sex fall rapidly, the females being still in excess, but the two are nearly equal at twenty-one. The females continue, however, in slight excess until twenty-nine, when the two sexes are affected equally. After this the relation between them is reversed—in almost every year the males are more numerous. The females present no increase at the climacteric period, and they cease much sooner than do the males. The latest age at which epilepsy commenced in a woman was fifty-five, whereas in men cases commenced at fifty-eight, fifty-nine, sixty-two, sixty-four, and seventy-one. Thus at each of the maximum periods, at infancy and puberty, the excess of females is very great. During the later period of childhood the numbers are nearly equal. The excess of females lessens after puberty, and ceases by middle life.

How far does an inherited tendency influence the age at which the disease commences? It is often stated that when there is heredity, the disease begins before twenty. We shall, however, see that, so far from this being true, the influence of heredity continues until a late period of life, and, although absolutely greatest in youth, it is relatively only a little less during adult than during early life.

Particulars as to heredity and age at commencement were noted in 1120 cases, of which heredity existed in 408. The distribution of these through life was nearly the same as that of the non-hereditary cases. About 5 per cent. began in the first year of life, and the annual number fell to a minimum in late childhood, to rise to a maximum at puberty. This maximum, however, occurred at fourteen years of age—a year earlier than the maximum for non-hereditary cases, which was at fifteen and sixteen. The cases with heredity lessen gradually during life, but continue to occur to the last. The latest case of the entire series was a man who suffered from what was apparently idiopathic epilepsy commencing at the age of seventy-one years, and in him the disease was inherited, his father having suffered from fits, clearly epileptic, for many years.

The relative frequency of heredity is shown by the proportion which the hereditary cases bear to the total number commencing at each period of life. The relative frequency, in periods of twenty years, is shown in the following table:—

Age.	Total cases.	Heredity.
Under 20	844	319, or 38 per cent.
20 to 39	235	80, or 34 ,,
40 and over	34	9, or 27 ,,

The average for the whole of life is 36 per cent. This is exceeded by 2 per cent. in the first twenty years; in the second twenty years the percentage is only 2 below the average; while in the cases commencing over forty it is only 7 per cent. below the average.

Since the first twenty years include the two maxima at infancy and puberty, it is desirable to examine the influence of heredity during this period in greater detail, and we may, at the same time, consider how far the two sexes exhibit its effects.

During the first three years of life the disease is inherited by a larger proportion of females than of males (females 41, males 33 per cent.). During the next three years the proportion of heredity in females is nearly the same, that in males rises. The third triennial period, six to eight, presents a lower percentage of hereditary cases than any similar period under twenty, but the minimum proportion in males occurs in the next triennial period, nine to eleven. In females, however, there is in this period a rise, and the maximum proportion for this sex is attained in the period twelve to fourteen; it falls slightly in the next two periods. The proportion in males rises after the minimum in the period nine to eleven, but never quite attains the proportion presented by the second triennial period of life. In the first twenty years as a whole, the excess of heredity in females over males amounts to 7 per cent. (males 34, females 41 per cent.). Between twenty and forty the proportion is reversed, the percentage heredity is greater in males than in females (males 36, females 31 per cent.). Over forty, of 24 males there was heredity in 6; of 7 females there was heredity in 3.

The St. Gothard Hospice.—Between October 1, 1878, and September 30, 1879, this hospice has given shelter to 11,101 travellers, and has distributed to them 45,906 rations. Many of the wayfarers have received shoes, linen, and clothes; and 132 of the number have been treated in the infirmary on account of illness or frozen limbs. The expenses of the establishment have been 13,298 fr., and the receipts 12,658 fr.—*Union Méd.*, February 17.

ORIGINAL COMMUNICATIONS.

ENTERIC FEVER IN INDIA;

WITH SOME OBSERVATIONS ON ITS PROBABLE ETIOLOGY IN THAT COUNTRY.(a)

By JOSEPH EWART, M.D.

In venturing to bring the subject of enteric fever before the Society, Dr. Ewart said that his chief object in doing so was to offer the results of his own experience bearing upon the probable etiology of the disease, as it presented itself to him, in Europeans and natives, during his service in India. That it had long found a congenial home in our Eastern Empire, may be gleaned from the classical works of Clark, Annesley, and Twining. But the distinguished honour of first identifying it there, on the lines laid down by Gerhard, Stewart, and Jenner, belongs exclusively to Surgeon-Major Scriven of the Bengal Medical Service. Scriven had learnt the error of the prevailing opinions, which excluded the affection entirely from India and the tropics, from a post-mortem examination at Meerut, 1851, in which the ulceration of Peyer's patches and other appearances characteristic of typhoid were unmistakably demonstrated, whilst the history of the previous symptoms of the case agreed fully with the view entertained regarding its true nature (*Indian Annals of Medical Science*, No. viii., page 512, 1857). In 1854 he published some rough notes of three cases met with in Burmah (*Medical Times and Gazette*, page 70, January 28, 1854). He subsequently saw, whilst serving at the European General Hospital, Calcutta, one or two doubtful cases which recovered, and three others regarding the nature of which there never was any doubt; and in all these the diagnosis was confirmed by the autopsies (*Indian Annals*, No. viii., page 521 *et seq.*). The subjects of the disease were young Europeans residing in such widely scattered localities as British Burmah, Lower Bengal, and the N.W. Provinces.

In the latter part of 1855 Dr. Ewart detected the presence of enteric fever among the native prisoners at the Ajmeer Gaol. Three well-marked cases, with an epitome of the symptoms during life, and of the necroptic appearances at the inferior end of the ileum, were recorded and published in the seventh number of the *Indian Annals*. At the concluding part of that paper he remarked:—"I would farther observe that, without the most scrutinising post-mortem examination being made in all those fatal cases which are denominated remittent fever, the conclusions drawn must be attended with some degree of uncertainty. Are not many of these examples of typhoid and typhus fever?" When subsequently attached to the Megwar Bheel Corps, he noted several well-marked cases among the Bheels of the regiment and the aborigines of the district. It prevailed more especially in the autumn and early months of the winter season, when the worst forms of malarious fever abounded. This experience, coupled with that obtained at Ajmeer, induced him to inquire, through the columns of the *Indian Lancet*, whether many of the remittent fevers met with in hot climates were not, in reality, either typhus, typhoid, or relapsing fevers, modified, and often materially aggravated, by the presence of malaria in the system. In 1860, during great scarcity, he took note of the prevalence of relapsing fever, and that many of the so-called malarious remittents were simply typhoid or typhus fever modified—often masked for a time by malarious poisoning, he has repeatedly observed, ever since this declaration was made, both in and around Calcutta and elsewhere in India. In a very large number of remittents with diarrhœa and severe typhoid symptoms the chief factor is the typhoid fever poison. When the blood is also surcharged with a large and effective dose of malaria, death often ensues from the combined operation of these causes, before ulceration of the agminated glands occurs. This happened to three of his patients, residing in the suburbs of Calcutta, in 1875, who succumbed in from eight to twelve days from what would formerly have been designated as remittent or jungle fever; but in all there was very marked swelling and prominence of the agminated glands. Had these patients survived long enough, ulceration would have been developed in due course. In both natives and Europeans who have been subjected to the influence of malaria the fluctuations of temperature in enteric fever are greater than in those who have never been exposed to the action of the poison, the morning remission being so marked as to delude the observer into the belief that he is dealing with a malarious remittent simply, when he is really called upon to encounter enteric fever modified by malarious infection of the system. In his practice at the College and General Hospitals, and among the various classes of the community of Calcutta, he has seen the disease in all its phases—so mild that persons have gone about their ordinary business during the greater part of the fever; so severe as to end fatally in a few days, from an overpowering dose of the poison, or from complication with serious malarious poisoning; or so severe as to terminate rapidly by uncontrollable hæmorrhage from ulcerated agminated glands, or by perforation of the gut and general peritonitis. In natives the rash is not so easily made out as in Europeans; but with care it can often be distinguished in those whose shades of colour verge upon brown rather than black. In a certain proportion of Europeans it is not observed or escapes notice. But in fatal cases of this kind the characteristic and unmistakable ulceration of Peyer's patches is nevertheless found after death. Ever since Scriven directed attention to the subject, enteric fever has been recognised as a constant factor in the sickness and mortality in the Calcutta General Hospital, to which he was attached for several years. The conduct of the disease has been most carefully watched, and fatal cases, whenever possible, tested by post-mortem examination. The following information is extracted from Dr. Ewart's reports for 1873 and 1874:—

	'65.	'66.	'67.	'68.	'69.	'70.	'71.	'72.	'73.	'74.
Cases of typhoid .	17	18	12	5	4	14	15	17	7	11
Died . . .	3	3	4	3	3	1	5	11	3	5

In Scriven's discovery of enteric fever among young Europeans, and Dr. Ewart's recognition of it among natives, the first thing which attracted attention was the morbid anatomy of the agminated and solitary glands at the lower portion of the ileum. Its endemic occurrence has since been established and acknowledged by Edward Goodeve, Chevers, Fayrer, Morehead, Francis, Cornish, Furnell, Lyons, Moffatt, Massy, O'Brien, Cleghorn, Green, Hanbury, and a host of others, comprising many of the most able and zealous members of the Indian and British Medical Services practising in India. A place has been assigned to it in the statistical returns since 1871. The general result is that enteric fever now figures as the most fatal form of pyrexial disease met with among the younger European soldiers sojourning in India. Year by year more and more has been heard regarding its extensive prevalence. So that, according to the statistics lately furnished by Dr. Bryden, there occurred, in the course of the three years ending 1876, no fewer than 368 deaths among the European troops in India, ascribed to the ravages of enteric fever. From the facility with which necropsies can be commanded in the British Army, most of these cases must have been verified by post-mortem examinations. Apart from the much greater number of recoveries which must have been observed, these fatal cases constitute a significant and important outcome of clinical and pathological work by a large body of medical officers, scattered over the length and breadth of the land, who were, before they migrated, in the ordinary course of duty quite as competent, from previous training, education, and experience gained in the medical schools of the United Kingdom, to diagnose enteric or typhoid fever, as to distinguish any other grave specific disease or fever in our nosology.

The disturbing influence of malarious poisoning is not specially peculiar to enteric fever. During malarious seasons it has to be taken into account in the diagnosis, prognosis, and management of many other morbid conditions—both surgical and medical. Every experienced physician and surgeon knows how materially convalescence or recovery from acute disease, local and general, is retarded or hindered by its existence in the economy. This fact is, doubtless, equally well recognised by those having experience of the ailments among persons who have finally taken up their abode in this country after protracted residence in the more malarious parts of tropical and tropoidal regions. But, whilst acknowledging so much, there does not seem to be any valid ground for admitting that there is any more intimate relationship between malaria—the potential cause of genuine paroxysmal fevers—and the poison or *materies morbi* of enteric fever, than there is between the former and the

(a) Read at the Epidemiological Society on February 4, 1880.

cause of any other affection whose course it may modify, complicate, aggravate, or even mask. In reviewing this department of the subject it should not be forgotten that, in medicine, decentralisation has been the tendency of our times. It behoves us also to bear in mind that formerly it was the fashion to ascribe the invasion and development of small-pox, measles, and scarlatina to the operation of a single causative agency; and that prior to the investigations of Bretonneau, Louis, Gerhard, Stewart, and Jenner, typhus, typhoid, and relapsing fever were all viewed as springing from a common source. The result, however, of the accumulated observation during the past thirty years has been to demonstrate more and more clearly the non-identity of the poisons exciting typhus, typhoid, and relapsing fever, with as much precision and exactitude as clinical research had proved, long before, the non-identity of the poisons lighting up an attack of variola, measles, or scarlatina. Such being, with very general consent, the present state of scientific opinion in this sphere of etiology, it is difficult to subscribe to the hypotheses recently promulgated, that, on the one hand, enteric fever in India is only one of the various expressions of malarious poisoning, and that it is only malarious remittent or continued fever with intestinal complication; or, on the other, that it may be the product either of a specific cause or of malaria. Experience of enteric fever in India tends to show that malaria—such as is the accepted cause of paroxysmal fevers—is never the cause, *per se*, of enteric fever in that country. And though it is not, perhaps, necessary, in the existing state of our knowledge, to accept in its entirety the pathogenic theory of its origin, yet the intensely insanitary condition of the cities, towns, villages, and hamlets throughout India renders it inexpedient to dispense with it as unquestionably the best working hypothesis hitherto advanced to explain the endemic prevalence of the disease there; or to fall back upon the existence of two or more efficient sets of exciting causes for the same specific affection. There is, indeed, no more ground for allowing that enteric fever, as observed in tropical climates, can be roused into activity in the human subject by two or more sets of poisons—viz., marsh miasmata or malaria, and a specific poison too—than there is for proclaiming the theory that any of the contagious exanthemata can be originated by more than one specific poison.

That of late years, or at least since 1862, the cause of enteric fever in temperate climates has usually been attributed to the existence of putrescent or decomposing filth of an animal nature, is very patent from the published literature of the subject. The evidence thus available goes to show that, whether the potential poison is generated in such a *nidus de novo*, as was believed by the late lamented Dr. Murchison, or not, it is in its beginnings—in its genesis—in some way or other, intimately associated with the presence of animal matter or filth undergoing putrefactive metamorphosis. As it is, probably, with the cholera evacuations, so it may be with the excreta of enteric fever: the effective *materies morbi*, or germ, or poison—call it what we may—may not exist in a perfected and matured state, as maintained by the late Dr. Budd of Bristol and others, in these at the time of their escape from the alimentary canal. But that, in both instances, the material exists in these dejecta, out of which the effective poison can be reproduced, under favouring conditions—it may be, in conformity to the law of the "alternation of generations"—is quite within the region of possibility, if not, indeed, of probability. At any rate, the phenomena of this fever are constantly being reproduced in identically the same form, attended by a characteristic train of symptoms and accompanied by a series of pathognomonic lesions, in all parts of the world—in the white as in the black races—but subject, in malarious seasons, in hot countries, to some modification, as has already been admitted in the foregoing observations, from the action of a single cause, with as much unerring certainty as is a potato or a turnip, placed in a congenial soil, under the needful conditions of heat, moisture, and light, from their respective seeds, or as is syphilis or small-pox from their respective poisons or germs. On such a hypothesis as this, the generation of the disease, and its subsequent dissemination to the predisposed through infected air, water, milk, and other articles of aliment—it may sometimes be by means of foul clothing, bedding, or ill-ventilated and neglected rooms in which cases may have been accommodated,—become intelligible.

When Dr. Ewart detected enteric fever among the prisoners of the Ajmeer Gaol, the outbreak was attributed to the extremely insanitary condition of the prison itself. No word-painting could exaggerate the abominable filthiness of the sleeping accommodation set apart for the convicts. They were arranged, in groups of from fifteen to twenty, in narrow, low-roofed cells, and packed far too closely together. A few earthenware vessels were provided as urinals and commodes. In this way they were herded together from 8 p.m. to 6 a.m. daily. After the removal of the prisoners, generally for outdoor labour on the roads, the filth was taken away, but much of it was washed into shallow channels leading to a neglected cesspool just outside the building, from which unspeakable odours emanated on the south-western aspect, or in such a situation as to allow the effluvia issuing therefrom to be wafted back into the interior of the gaol by the prevailing wind. The well from which the drinking-water was drawn was not far distant—only a few yards. In addition to direct sources of contamination, which were self-evident, it was so near the cells, drains, and cesspool that it must have been exposed to pollution by percolation through the intervening gravelly soil.

In those days the pythogenic theory had not been propounded. Milk had not been regarded as a possible vehicle for the conveyance of the poison into the human economy. But in relation to this latter point Dr. Ewart briefly narrated an incident which happened to him when Civil Surgeon of Ajmeer. A complaint having been submitted concerning the quality of the milk provided for the consumption of the prisoners, it was found that it had a most offensive taste and smell. His native doctor suggested that this arose from its being mixed with impure water. They visited the village from which the milk was supplied. Some fresh-drawn milk was then mixed with water obtained from a neighbouring stagnant pool, which was used for ablution and bathing by men, women, and children, and around which were the evidences of fæcal pollution. The mixture thus procured corresponded in its offensiveness of taste and smell to that which had been objected to as unfit for use and condemned. On urging these facts in the proper quarter the contractor was changed, and no more milk adulterated with stinking water was supplied during the remainder of his residence at Ajmeer.

When at this station he met with cases of enteric fever among the population of the city. But confirmation of the diagnosis in fatal cases was not practicable, owing to the objection of the natives to post-mortems. This unavoidable defect is all the more to be regretted, because, as has already been pointed out, it too often happens that, in the very dark skin, the lenticular rose-coloured eruption, coming out in successive crops, and in all their phases, disappearing on pressure, and quickly returning on the withdrawal of the same—such a valuable indication in the fair-skinned European—cannot always be distinguished. Here, again, there was no difficulty in discovering abundance of animal filth. In almost every house in the town there was a privy, and in many a cesspool in addition: the evil odours arising therefrom in close, still, and warm weather tainted the atmosphere within; whilst the drains in the streets, receiving liquid sewage from overflowing privies and cesspools, polluted it without.

Dr. Ewart recorded similar experiences at Kherwarrah among the Bheels of his regiment and among the community and at Calcutta during his connexion with the Medical College and General Hospitals. The disease was most abundant in the autumn, then in the cold season, next in the hot weather, and least so during the monsoon. The modifying power of malaria was most apparent in the autumn and first half of the cold season, becoming less so in the middle and end of this, and scarcely perceptible in the remainder of the winter and during the hot months. Strangers of the dark and fair races, below the age of thirty, were most exposed to attack. It prevailed in the palaces of the rich and well-to-do, and in the huts and hovels of the poorer classes. It spared neither sex. His impression, derived from unremitting attention to this subject, was that enteric fever was domesticated in Calcutta.

Looking around for the cause of this, a little attention will show that the same insanitary conditions as are generally considered to lie at the foundation of the disease, in temperate regions, exist, to a very marked extent, in the metropolis of British India. After giving in detail a description of the

utterly indescribable filthiness of the back-slums of many parts of the European, and most parts of the native, quarter, the difficulty does not consist in not finding plenty of animal filth to account for any amount of enteric fever, but in understanding how it is not still more prevalent than it is in such an unsavoury city. It is explained that the "reason why this form of fever is not more frequently met with amid such an abundance of fæcal matter in a state of putrescent fermentation, is probably to be discovered in the fact that fortunately most of it is not pent up in ill-ventilated sewers, but exposed daily to the powerful antiseptic influences of the atmosphere and sunlight in open drains, open privies and latrines, and in comparatively open cesspools. The impression which has been gaining ground of late years, that as the sewering of the town has been advanced, so has enteric fever been more frequently observed, lends countenance in support of this view. This augmented prevalence, however, may, in some measure, be owing simply to greater recognition of the fever, although it must not be forgotten that attention has been directed to the endemic existence of the disease during the past fifteen or twenty years."

As regards the assertion that such insanitary conditions are not to be found in military stations—barracks and hospitals,—Dr. Ewart is "not satisfied with the condition of the privies used by natives in the service of officers, and of the latrines employed by the numerous followers of native and British regiments. Even if the sanitary excellency of these is unimpeachable, there is still overwhelming evidence in the reports of the Sanitary Commissioners to prove that the neighbouring bazaars, frequented more especially by the younger soldiers, present, in unmitigated intensity, all the insanitary blemishes summarised in the foregoing narrative. Here it is—it may be far away from their barracks—where they are not only liable to breathe air impregnated with emanations from decomposing animal filth, but to obtain food, milk, drink, and water of questionable quality and purity."

On a full review of the subject there is nothing in the occurrence of enteric fever in India repugnant to Murchisonian doctrine that, as in its etiology, it is intimately associated with the presence of putrefying animal or fæcal filth. "The reason why the origin of the disease has not been more frequently traced to pythogenic causes is probably due to the stage of incubation having been too much excluded from consideration. The difficulty, especially in the case of those who dwell in clean and well-cared-for barracks, is greatly magnified by the period of latency or incubation. This varies from seven or ten to fourteen or twenty days, so that to trace the origin of any case the investigation must be of a much more searching and comprehensive character than any which has hitherto been conducted in India. It is manifest that the alleged freedom of the barracks and their immediate surroundings from filth is, in itself, scarcely sufficient. The inquiry should embrace a calm and impartial review of the patient's history and habits, derived *first* from himself, and *secondly* connected by the collateral evidence of his friends, extending over a period of many days antecedent to the attack. As the disease is rarely spread by direct contagion in the well-conducted military hospitals in India, it follows that, in almost every isolated case or series of cases, a similar exhaustive investigation would have to be undertaken if the source of it, in all cases, is to be identified to the utmost extent attainable."

Dr. Ewart does not believe that the enteric fever lately prevailing in the Madras Command has been merely a "malarial or climatorial fever of the continued or remittent type with intestinal complication." "Even should the result of future investigation go against the pythogenic theory of its origin, this conclusion, however well grounded, would not suffice to justify us, with the evidence of so many independent clinical observers proving the contrary, in disputing the domesticated existence of the fever in India. It would rather have the effect of causing inquiry in some other line or lines with a view to discover the habitat and nature of the cause, not only in that country, but in Europe and America." . . . . "Whatever views may be held concerning the cause, so long as the thing—enteric fever—is present in India, it will, now that so much attention has been attracted to it, continue to be more and more generally recognised as a distinct entity generated and diffused independently of malaria, though, like many other affections, being liable to be modified by it, perfectly irrespective of the views that may, from time to time, prevail about its precise etiology."

ON TWO CASES OF NÆVUS.

By B. WALKER, L.R.C.P.E., etc., Spondon, Derby.

The following two cases of nævus are thought worthy of record, being interesting from their situation, and from the difficulty of treatment by the old method of ligature or suture, which were fairly tried and failed; and from the facility with which they were cured—one by the sodium ethylate of Dr. Richardson, and the other by the actual cautery.

Case 1.—A. B., aged three months, was brought to me on August 28, 1878, with a nævus of the upper lip involving the mucous membrane and extending to the gum over the site of the central incisors. The skin was not involved. It gave to the child a pouting and prominent upper lip, and was increasing in size so as to interfere with the prehensile power at the breast, and the child was beginning to fail in its nutrition. It was operated on by ligature after transfixion with a needle, and again subsequently, on September 9 and December 17, by sutures; but it was most difficult to include the whole by either method, and the nævus rapidly increased in size; when on December 25 the child was placed under chloroform, and the actual cautery applied pretty deeply into the growth in two or three places. The slough separated in a few days, and has left a perfect lip without disfigurement.

Case 2.—Laura L., aged thirteen months, presented a nævus over the parotid gland, in size from a half-crown to a crown piece. The skin had a pinkish-blue and mottled appearance, being involved in about one-half its extent. The surface was prominent, and the swelling increased when the child cried. It was also gradually getting larger. On August 27, 1878, it was operated on by wire ligature, being previously transfixed with needles, and again on September 9 and November 6, but without arresting the progress of the growth. On November 12 the sodium ethylate of Dr. Richardson was painted over it, and again three times in the next fortnight, and five times more at intervals of a month or two till August 3, 1879, when the nævus was practically cured, the only marks perceptible being from the surgical interference (the entrance and exit points of the needles). Had the ethylate been used from the first there would have been none. Dr. Richardson's discovery is a most valuable addition to our *armamentarium*, and the application is attended by little or no pain.

The Dorpat University.—In the present session the number of students amounts to 1105, and 517 of these belong to the Medical Faculty—viz., 410 medical and 107 pharmaceutica students.—*St. Petersburg. Med. Woch.*, February 7.

The Metropolitan Water-Supply for January Last.—The report of the Water Examiners on the metropolitan water-supply for the month of January last records a slight falling off in the quality of the supplies. The state of the water in the Thames at Hampton, Molesey, and Sunbury was very turbid and bad from the 1st to the 8th of the month, when it improved, and remained in a good condition until the 17th; it was then again bad for three days, but on the 21st it fined down, and continued in fair condition for the remainder of the month. The water in the river Lea was generally good during the month. In fact the water at all the intakes of the metropolitan companies was generally in an indifferent condition during the month of January; the filtration was, however, efficient, the water having been clear, bright, and properly filtered when delivered. Dr. Frankland reports that the Thames water supplied by the Chelsea, Southwark, Grand Junction, and Lambeth companies was greatly inferior to that sent out by the same companies in December. The West Middlesex Company, nevertheless, whilst taking water from the same source, reduced the proportion of organic impurity to less than one-half before distribution. All the Thames water, Dr. Frankland says, was efficiently filtered, except that supplied by the Grand Junction Company, which was slightly turbid, and contained moving organisms. The Lea water distributed by the East London Company was of superior quality, but that sent out by the New River Company was only slightly better than Thames water; both these companies efficiently filtered the water supplied by them.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

GUY'S HOSPITAL.

A GROUP OF CASES OF INJURIES TO THE HEAD.

(Under the care of Mr. BRYANT.)

(*Concluded from page* 205.)

Slight Injury to Head—Hæmaturia—Relieved.

[Reported by Mr. LISTER.]

THOMAS H., aged nine, was admitted into the accident ward on November 11, 1879, under Mr. Bryant's care. The patient was riding in a cart, and with the driver was thrown out, the patient falling upon the driver, and their heads bumping. Was rather dazed at the time, but recollects being brought to the hospital. No bleeding from the nose or mouth. His pupils were much dilated. Was sick after admission, and rather drowsy.

November 12.—Apparently well. Pupils still dilated. Has passed some bloody urine.

13th.—Patient's urine of a deep red colour. A portion which had stood for twenty-four hours showed a clot-like sediment at the bottom. The clearer portion was blood-coloured and full of albumen.

17th.—Urine is of much better colour. There is a slight smokiness, and it contains albumen. Transferred to Stephen ward under Dr. Pye-Smith. The hæmaturia never existed to any amount, and no cause for it was discovered.

Fracture of Base of Skull—Bleeding from Ear for Four Days—Facial Paralysis.

[Reported by Mr. PALMER.]

Charlotte B., aged fifty-six, was admitted into Lydia ward on October 11, 1879, having just been picked up by a constable in the street in a cold and senseless condition. On admission she had the appearance of being drunk and insensible. She vomited some matter mixed with apparently clotted blood. There was a contusion in the right parietal region, and the patient bled very freely from the right ear. There was no apparent difference in the size of the pupils. Was put to bed with ice-bags to her head.

October 12.—Became sensible at 8 a.m. There is great general tremor in lower jaw and hands. There has been profuse bleeding from the right ear. She complains of great thirst, and drinks iced milk freely. Pupils equal.

13th.—Still bleeds from ear. Complains of headache. Is quite sensible.

15th.—Partial paralysis of right side of face made out. The bleeding from the ear has ceased.

16th.—Is better, but complains of dizziness. Facial paralysis has disappeared.

18th.—Patient says she has been subject to fits for six years, and during the last two or three years has had singing and buzzing, particularly in the right ear. She has frequently fallen down in her fits, and most generally on her right side.

19th.—Discharge from ear ceased.

20th.—Pulv. rhei salin. ℈j., aq. camp. ℥ss., stat.

November 15.—Left, apparently quite recovered.

Injury to Head—Apoplexy—Left Hemiplegia—Relieved.

[Reported by Mr. L. BURROUGHS.]

J. R., aged forty, a married woman, mother of seven children, and had had no previous illness, was admitted on January 2, 1879, into Lydia ward. On December 23 she fell down at her own door, and on getting up fell forward and struck her head a second time on the same side (that is, the left). She then walked upstairs to her bed, felt giddy, and fell again. With assistance, she was placed on her bed, but she again fell on to the floor. She remained unconscious until the morning of the 25th, when she came to her senses, could talk rationally, but gradually lost the use of her left arm and leg.

On admission, patient had complete hemiplegia of the left side; face drawn to right side; deaf in left ear; tongue pointed to left side; complained of pain in her head. Her head was shaved, but no signs of violence were discovered.

January 3.—Temperature 98·8°. Urine, specific gravity 1020, no albumen.

6th.—Temperature 99°.

10th.—Since her admission, patient has lain in the same condition. Can give a clear account of herself, but lies with her eyes widely opened, and looks dazed and vacant. She has now some slight power of using the left arm, but the left leg is kept spasmodically flexed. Is not deaf, and the facial paralysis is less marked.

16th.—Patient can move her left arm, and has some control over the left leg.

Patient complained of a gnawing pain in her leg and arm, but continued to improve, and on February 3 she left, able to move her paralysed leg and arm fairly well.

Fits after Injury to Head—Recovery.

[Reported by Mr. SHADWELL.]

William A., a sailor, aged forty, was admitted into accident ward on May 13, 1872. On May 10 he was engaged in steering a ship, when it struck the ground, and the tiller struck him on the left side, knocking him down. He got up without any assistance, and did not feel much the worse for the accident until the next day, when he complained of a pain in his side, and soon after had two or three fits, lasting from five to ten minutes each. Whilst they lasted he was quite unconscious, and after they were over he was very drowsy. These fits continued up to the date of his admission. He lost the power over his left arm on May 12, and when admitted he was still unable to move it. When getting into bed on his admission he had a slight fit, which lasted about a minute. He first became rigid, and then his right arm began to move rapidly. After the fit he went to sleep.

On May 14 he was ordered to remain quite quiet in bed, and from that date he was altogether free from the fits; he was in a day or two able to move his hand and arm about with the greatest ease, was able to get up on the 16th, and left the Hospital, feeling quite well, on May 18.

He had never had any fits before his accident, nor was there any family predisposition to epilepsy.

Old Injury to Head—Epileptiform Fits—Incision of Scalp down to Bone—Recovery.

[Reported by Mr. G. R. MARSH.]

R. W. R., a warehouseman, aged forty-four, of good family history, was admitted into Job ward on October 31, 1878. He was in good health until two years before, when he was struck on the top of his head by a hard parcel which fell from a height of twenty feet. He was stunned, but there was no external wound, and for two months he noticed nothing wrong. Then he suddenly fainted, but soon recovered consciousness, and from that time his memory and sight, which were previously good, failed, and his right arm became weaker, his right hand often trembling a good deal. If he read much he became confused and giddy; and after any excitement, or when he got hot in bed, he at times totally lost consciousness for half an hour, during which time he was very violent, but never injured himself. For the last eighteen months previous to admission he had suffered from a dull, heavy pain on the top of his head, and took to use spectacles to read with. He tried blisters and croton oil to the injured part, but they only gave temporary relief. He also took bromide and iodide of potassium. He went to a hydropathic establishment and remained there for two months, but got no relief. For the last fortnight he had felt a constriction round his thorax and had been unable to do any work. Two days before admission he had a fit, and was generally convulsed. Upon admission he appeared a strong man, but had slightly less power in his right than in his left arm. He used spectacles, for his sight was weak, the left eye being the weaker. There was thought to be a slight depression about the size of a shilling on the left side of the head just above the parietal eminence, which was tender to the touch; it corresponded to the spot where he was injured at the time of the accident.

November 5.—The patient's head was shaved. Temperature 98·8°. Chloroform having been administered, a crucial incision was made over the depression, and carried through the soft structures down to the bone. No evidence of fracture could be discovered, and the bone looked perfectly healthy. The parts were placed in apposition and a sponge bandaged over the wound.

6th.—Temperature 99°. The patient said he could see better and felt much more cheerful.

8th.—The patient had not had a fit since his admission; temperature 98·4°.

10th.—Both eyes were slightly hypermetropic. The ophthalmoscope showed that both optic discs were healthy, and that the blood-supply to the retina was not diminished.

12th.—The wound had healed except where the incision crossed, at which spot there was seen a slight amount of suppuration.

20th.—The patient was no longer subject to giddiness, there was no weakness of the right side, and his sight had improved.

22nd.—The wound in the scalp had healed, and he left the hospital convalescent.

A month later when he reported himself he was quite well and free from all pain.

GENERAL HOSPITAL, CHELTENHAM.

CASE OF A LOOSE CARTILAGE IN KNEE-JOINT REMOVED UNDER THE ANTISEPTIC SPRAY.

(Under the care of Dr. FERGUSON.)

[Reported by Mr. G. A. CARDEN, House-Surgeon.]

THOMAS P., aged sixty-five, was admitted on September 22, 1879, under the care of Dr. Ferguson. Complained of having a loose body in his left knee-joint, which he discovered ten months ago. Last winter (1878) he was laid up with synovitis for three months, the body having got caught behind the patella.

On admission a hard nodule the size of a walnut could be felt under the quadriceps extensor tendon; it was freely movable, and could be pushed from one side of the joint to the other. By his own request it was removed on September 24, 1879, under the carbolic spray. The body was first pushed over to the inner side of the tendon, and fixed there by a harelip-pin. An incision was then made, an inch and a half long, quite down on to the cartilage, when, with a little pressure on either side, the body slipped out; the edges of the wound were then accurately adjusted and held together by three silver sutures, gauze dressings being applied. In the evening the patient suffered considerably from shock, the operation having been performed without an anæsthetic. His temperature rose to 102·6° Fahr. On the following morning he was considerably better, the temperature having fallen to 99° Fahr., and all pain gone from the seat of the wound. It was dressed on September 26 for the first time, the wound looking quiet and quite sweet.

From September 26 to October 2 he suffered from a very severe attack of hospital diarrhœa, which weakened him very much.

On October 2 the knee was dressed, the sutures were removed, and the wound was healed. A week later all dressings were removed, and a starch case applied to the whole length of the limb, as a little synovial fluid had accumulated in the joint.

The man soon recovered his strength, and when the case was removed, six weeks later, the joint was found to have resumed its normal condition.

The body removed from the joint was an inch long, three-quarters of an inch broad, by a quarter of an inch thick; it was somewhat oval in shape, the surfaces being concavo-convex, and roughened.

MEATH HOSPITAL, DUBLIN.—On Saturday, February 21, the past and present students of the Meath Hospital met in the theatre of the institution for the purpose of presenting an address to Mr. Lambert H. Ormsby, one of the Surgeons to the Hospital, on the occasion of his resignation of the Honorary Secretaryship to the Medical Board—an appointment which Mr. Ormsby had held for some eight years. The chair was taken by Mr. George H. Porter, Surgeon to the Queen, and Senior Surgeon to the Hospital. Most of the members of the medical staff were also present. Mr. James H. Parkinson, L.K.Q.C.P., L.R.C.S.I., read the address, which was artistically designed and illuminated; and Mr. Ormsby briefly replied, thanking his friends for their kind and complimentary expressions. The address was accompanied by the presentation of a massive gold ring

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Medical Times and Gazette.

SATURDAY, FEBRUARY 28, 1880.

THE NEW BY-LAWS RELATING TO LICENTIATES OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

THE Royal College of Physicians wisely determined last year that they would not wait any longer for the passing of a Medical Act Amendment Bill, and the establishment of a Conjoint Examining Board, but would revise and amend the by-laws for their own lowest qualification—the College licence—without any further avoidable delay. Accordingly the Council was entrusted with the work of drawing up a new set of by-laws, which was discussed and formally adopted at a meeting of the College on the 16th inst. The work of the Council was rendered the easier by the fact that the College had already accepted the examination-regulations adopted by the Committee of Reference appointed under the proposed Conjoint Scheme for England, and its chief work was to bring these into conformity with the most recent Recommendations of the Medical Council. The new regulations or by-laws make several alterations of great importance in the conditions for the licence; and we therefore notice them at some length for the information of the profession.

There are to be *three professional examinations* instead of *two*, as heretofore, each being partly written, partly oral, and partly practical. The *First Examination* will be open to all candidates who have been registered as medical students by the General Medical Council, so that it may be passed as soon after students have joined a recognised medical school as they may choose to present themselves for examination. The subjects of the examination are Chemistry and Chemical Physics, meaning thereby heat, light, and electricity; Materia Medica, Botany, and Pharmacy; and Osteology; and schedules will be drawn up indicating the range of knowledge required in all the subjects except the last. The College considers that students can

very well learn these subjects by private tuition, and therefore does not compel attendance on any courses of lectures in them. The only certificates required are, that a student has "received instruction" in Chemistry, including Chemical Physics, Practical Chemistry, Materia Medica, Botany, and Practical Pharmacy; and instruction in Practical Pharmacy may have been received from a registered medical practitioner, or a member of the Pharmaceutical Society of Great Britain, or in a public hospital, dispensary, or infirmary. The subjects of the *Second Examination* are Anatomy and Physiology, and a schedule will indicate the range of subjects in Physiology. Candidates must have passed the First Examination, and must produce evidence of having, subsequently to registration, completed eighteen months of study at a recognised medical school, and of having attended a course of lectures on Anatomy, and on General Anatomy and Physiology, of having attended a separate practical course of General Anatomy and Physiology, and of having performed dissections during not less than twelve months. No candidate can be admitted to the *Third Examination* whose name has not been on the Students' Register at least forty-five months, nor till the expiration of two years after the passing of the Second Examination. The subjects of the examination are Medical and Surgical Anatomy and Pathology, including Morbid Anatomy; the Principles and Practice of Medicine, and Surgery; and Midwifery and Diseases peculiar to Women; and these subjects will include Therapeutics, Forensic Medicine, and Public Health. Certificates will be required of attendance on a course of lectures on the Principles and Practice of Medicine; and on Surgery; on Midwifery and Diseases peculiar to Women; on Pathological Anatomy, and on Forensic Medicine; of having attended, at a recognised hospital or hospitals, the practice of Medicine and Surgery during three winter and two summer sessions; of having attended during nine months clinical lectures on Medicine and during nine months clinical lectures on Surgery, and of having been engaged during three months in the clinical study of Diseases peculiar to Women; and of having discharged the duties of a medical clinical clerk during six months and of a surgical dresser during other six months. And, moreover, certificates must be produced of the candidate's having received systematic practical instruction in Medicine, Surgery, and Obstetric Medicine, and the character and scope of this systematic instruction are clearly laid down. It will be observed that the requirements as to attendance on lectures are reduced, and limited to one course only on each subject; but that the regulations are very strict as regards clinical work and systematic practical instruction. On these points the College has set an excellent example to other examining bodies. It is true that an explanatory note to the by-law regarding clinical work makes the regulation rather elastic, as it states that the duties of a clinical clerk and a dresser "may be discharged at a general hospital, infirmary or dispensary, or parochial or union infirmary, duly recognised for this purpose, or in such other manner as shall afford sufficient opportunity for the acquirement of practical knowledge"; still, the amount of evidence of practical and bedside teaching that is required is largely increased: and, on the whole, the new by-laws of the College cannot fail to increase the reputation and value of its licence. We will only add that the College shows much liberality in the by-laws regarding the exemption of a candidate from re-examination in subjects in which he has passed at other examining boards. Thus any candidate producing satisfactory evidence of having passed an examination on any of the subjects of the First Examination, conducted at any University in the United Kingdom, in India, or in a British Colony, will be exempt from re-examination on such subjects; and a candidate who has passed an examination on Anatomy and Physiology conducted by one of the Royal Colleges of Surgeons of the United Kingdom, or by the Faculty of Physicians and Surgeons of Glasgow, or one required for a degree in medicine or surgery at a University in the United Kingdom, in India, or in a British Colony, "after a course of study and an examination satisfactory to the College," will exempt from re-examination in those subjects. So too with regard to surgery, only examinations in that department in India or in the Colonies are not recognised. Exemption will also be granted under certain conditions to candidates holding foreign qualifications.

THE DEATH OF MISS MACLEAN.

We have fortunately arrived at the end of one of those unpleasant cases which from time to time arise among us as if to fulfil the functions of the slave at the Roman triumph. At least, they warn us that much of our boasted civilisation and Christianity is but skin deep, and that deeds from which the "unspeakable Turk" would recoil with horror, may occur among us without apparently giving rise to more than a transient "sensation," to be speedily forgotten until another case of kindred kind occurs to bring back its unsavoury memory. The only satisfactory point, indeed, to which we can refer in the case of Paine and the late Miss Maclean is the knowledge that an unmitigated rascal has met with something like his deserts. We can commiserate the wretched woman left to such unscrupulous guidance, but there can be no feeling of pity for the culprit, who, if he has escaped the gallows, has only not got what he may be said to have deserved.

The earliest transactions which culminated in the way now so publicly notorious are not quite clear to us, but those which occurred during the last year have been elucidated in open court. By some means or other a man named Paine, of unsatisfactory antecedents, who had been more than once married, and who had at the time apparently more than one wife alive, had been received into intimate relations by the widow and daughter of the late Colonel Maclean. The daughter was deformed through a crooked spine, and one leg was shorter than the other, so that she could not walk without the aid of a stick or umbrella. She was of diminutive size and unprepossessing appearance, but after her mother's death became the possessor of some little property. Her brother is a medical man, but whilst the events were proceeding which ended in the death of Miss Maclean he went to America, though not until Paine had settled down in his sister's house as her alleged husband. Dr. Maclean, however, knew at the time when he left that the two were unmarried. Before the death of Mrs. Maclean her daughter had become accustomed to the over-use of stimulants, though to what extent is not quite clear, and this tendency seems to have received no practical discouragement from Paine, though there was evidently on certain occasions an outward show or pretence of discouraging it when anyone was by. Whilst living in the house belonging to Miss Maclean at Broadway, near Worcester, systematic attempts would seem to have been made by Paine to obtain complete command of what money and property the lady possessed. The nature of these need not here be described; at all events, he endeavoured to insure her life on his own behalf, but failed in doing so, though he succeeded better in obtaining a transfer of the property he desired for himself. This business was finished by about the beginning of October last year, and it is chiefly with the events which occurred after that date that we have to do. Much drinking had been going on before, both by Paine and Miss Maclean, and she was evidently suffering

from the effects of it at or before the time referred to. But the chief question which arose at the trial was whether Paine had been actually instrumental in giving this excess of spirit, had encouraged her to take it, or even forced it upon her; or whether he had tried to dissuade her in every way whilst she insisted on having what she knew was doing her harm, but which she had no power to resist. Another question which was also of importance related to the feeding of the deceased. Of course, so long as she was able to move about there could be no question of her being able to get what she wanted; but when the wretched invalid became confined to bed there was some evidence to show that when she wanted food she was plied with drink.

During the period also whilst they were yet in the country, Paine had contracted an illicit alliance with the only servant in the house, and it was the evidence of this girl—not untainted, by any means—which was mainly employed to make clear the history of this time. Hence arises a good deal of the uncertainty which attached to this part of the case. At all events it is quite clear that after the visit to Worcester for obtaining the deed of gift on behalf of Paine the unfortunate lady continued to get worse and worse, until, when they removed to London, she was totally helpless. On the day of removal it is not quite clear whether her condition was one of profound weakness or of intoxication, or both, but it is quite clear that she was reduced to a very low state; nor did she long survive removal. On coming to London Miss Maclean was taken to a place, respectable enough, no doubt, but not such as she had been used to frequent, for it was only a coffee-house, and there she remained till her death. Paine himself took lodgings elsewhere, where he and the girl Matthews lived together as man and wife. He had brought Miss Maclean to London on the pretence of getting better medical advice than was to be had in the country, but he does not seem to have exerted himself in any way to procure the attendance of a skilled medical man; and when, almost by chance, he encountered a practitioner in the house where he lodged, he does not seem to have taken any further trouble in the matter. Miss Maclean had been brought up for the purpose of procuring a "certificate." The Powells, with whom she lodged, were told that her death was early expected. Spirits were thrust upon her, or exposed within her reach in every direction whilst Paine and Matthews were elsewhere engaged. All Paine's anxiety seemed directed at this time towards preventing any friends or relations coming near the unfortunate woman, and, according to the Powells' statement, he endeavoured to get them to put off the friends by means of a false telegram. Poor Miss Maclean did not last long. An inquest was held, and a post-mortem examination was made, which revealed an advanced state of liver disease, diseased lungs, and incipient fatty heart. The enlarged liver was, however, what had the most important bearing on the case. It was evident that the cirrhosis with which it was affected could not have been the work of a day—in all probability could not have resulted from any excess during the time Miss Maclean was under the direct control of Paine—namely, from early spring to late autumn. Moreover, it had been made out at Worcester, when there was a talk of a mutua life insurance, that Miss Maclean's liver was so notably enlarged as to have been mistaken for pregnancy.

The story is simple enough, and not without some of the elements of pathos as far as the unfortunate woman was concerned, but the legal points arising were not so simple. It was clearly a case where death occurred from the use of too much alcohol and too little food, but the two seemed to be very nearly equally concerned. The cirrhosis did not arise from the want of food, and clearly the cirrhotic condition had a good deal to do with the general feebleness which was, in its turn, in a great measure the immediate cause of death. In the notorious Penge case, in certain aspects not unlike this, Staunton was found guilty because, being the husband of the deceased, he had abstained from supplying the necessary food and comforts to keep her in life. His brother, who was paid to look after the woman, was also directly responsible. Alice Rhodes, who was no relation of Mrs. Staunton, was condemned, but received a free pardon on the grounds that she was not called upon, and could not be legally called upon, to do any thing to preserve the life of Mrs. Staunton. In the present case there was not proved to be any withholding of food, but there was evidently plying with liquor, which would destroy all appetite, besides working mischief on its own account. Nevertheless, it was apparently on the ground that due care had not been taken to procure the needful nourishment to keep Miss Maclean alive that Paine was condemned, rather than that he had forced spirits upon her. Had the latter been the ground of conviction, it is evident that several important considerations would have come into play: the degree of force or constraint employed; the quantity of the agent employed—this, too, altogether apart from the fact whether alcohol could be considered a noxious thing from a medico-legal point of view in such a case; and the relative effects of the alcohol partaken of before and after the deceased was under Paine's control. When the question was solely as to whether sufficient nourishment had been provided for a helpless woman, none of these need be discussed. The points, then, on which the jury had to decide were—the want of ability or undue negligence to provide nourishment; or it might be the settled purpose to prevent food being given; or thirdly, whether it was a legal duty on Paine, situated as he was with regard to the deceased, to do anything to prevent her death. It was just here that the case differed from the Penge case: in that instance, with the full ability there was undue negligence in providing nourishment, and Staunton was of course held to be legally responsible for not having procured what was necessary. Alice Rhodes was not so responsible in point of law, and she was not found guilty of forcibly preventing the access of food to the unfortunate woman, which would have been a crime in anyone. Here Paine was not the husband of Miss Maclean, and so was not in the same position as Mrs. Staunton's husband. But the law held that he was something more than a mere unconcerned spectator; it held him responsible for her welfare, and to this view of his responsibility he owes his conviction.

THE LICENSING BODIES AND THE GENERAL MEDICAL COUNCIL.

We resume our analysis of the replies made by the licensing bodies as regards their compliance with the Recommendations of the Medical Council:—

17. This embraces two Recommendations: "(*a*) That there be in future three professional examinations (as to this, see Recommendation 19); (*b*) That the professional examination be arranged in two divisions, the first to embrace the more elementary subjects. The first division may be completed at or before the close of the second year of professional study; but the second not till the expiration of two years after the passing of the first division, nor before the completion of the fourth year of professional study. The examinations and the subjects included in each to be such, and in such order, as may insure, as far as possible, a due continuity and sequence of study." 18. Gives the subjects to be included in each division. In the first (1) Chemistry and Chemical Physics; (2) Anatomy; (3) Physiology; (4) Materia Medica and Pharmacy. The second, (1) Pathology,

including morbid anatomy; (2) Medicine, including medical anatomy, clinical medicine, and therapeutics; (3) Surgery, including surgical anatomy and clinical surgery; (4) Midwifery; (5) Forensic Medicine. In England, the College of Physicians has this year considered and adopted these "recent" Recommendations; the College of Surgeons holds only two examinations for the membership—one at the end of eighteen months, the other at the end of four years,—and observes that the proposed regulations for the Conjoint Scheme are entirely in accordance with the Recommendations; the Society of Apothecaries has only two examinations, but Recommendation 18 "is strictly followed, except as regards Surgery"; at Oxford, "the division of the M.B. examinations into three instead of two is under contemplation"; the regulations at the three other Universities are more or less "conformable." In Scotland, the Corporations each hold two examinations only, the first "not before the end of the second winter session," or at "the expiry of the second year of study," and the second not before the completion of four years of professional study, or not before the termination of the winter session of the last year of study; the first embraces Anatomy, Physiology, and Chemistry, and the subjects of the second are very nearly those recommended. At the Universities of Edinburgh and Aberdeen there are three examinations: at Edinburgh the first is before the second winter, the second at the end of the third winter, the third during the fourth summer; the first is on Botany, Zoology, and Chemistry, the second on Anatomy, Physiology, Materia Medica, and Pathology, and the third on the remaining "recommended" subjects and Public Health. At Aberdeen the first is at the end of the second, the second at the end of the third, and the last at the end of the fourth year of study; the division of subjects is much the same as at Edinburgh, but Zoology is taken at the second examination, and the first includes "elementary Anatomy," and Comparative Anatomy and Surgery are taken at the second; at Glasgow there are four professional examinations—the order of them and the division of subjects are somewhat complicated; St. Andrews is "conformable." In Ireland the College of Physicians is "conformable" in having two divisions of the professional examinations, but does not require two years to elapse after the passing of the first; when the first may or must be passed is not stated: as to the division of subjects it conforms, except as regards Surgery, and adds Hygiene; the College of Surgeons "has always recognised the expediency of sessional subdivisions of the professional examinations," but the want of uniformity of system amongst licensing bodies had rendered its regulations on the subject impracticable. The College will be prepared to co-operate in any generally applied system of subdivision of professional examination; the Apothecaries' Hall is "conformable" as to arrangement of examinations and division of subjects, only adding "Botany" to the first and "Hygiene" to the second division; the University of Dublin holds four professional examinations.

19. That it is desirable that an examination in the earlier subjects of professional education should take place before the end of the first year of study. A recent regulation. Only two of the licensing bodies positively object: the University of Durham says "it cannot be complied with," and the University of Dublin "does not see the necessity of adopting" it; Cambridge quietly observes, "candidates are not encouraged to enter the examinations until they are prepared for them." The English College of Physicians has this year adopted it, the sister College points to provisions of the Conjoint Scheme, and the Society of Apothecaries thinks "such an examination desirable"; the University of London's preliminary scientific examination "is intended to fulfil this requirement"; the Apothecaries' Hall in Ireland "leaves this Recommendation to the option of candidates"; and the University of St. Andrews is "conformable."

The majority of the remaining Recommendations have reference to the conduct of the Professional Examinations, as—20. That the examinations "be conducted both in writing and orally, and that they be practical in all branches that admit of it"; and 21. That not less than two examiners shall take part in all oral and clinical examinations. All the licensing bodies in the three divisions of the kingdom reply that their practice is in conformity with both Recommendations. The Apothecaries' Society, London, states that "the principle" of Recommendation 20 "was adopted by this Court *before* the Act of 1858." We imagine that the licensing bodies differ somewhat among themselves in their interpretation of the last words of Recommendation 20.

22 and 23. The questions to be answered in writing are to be submitted to the whole body of examiners for consideration, and revision if desirable, before being proposed to the candidates; the written answers to be submitted to more than one examiner. In England, the practice of the Corporations and the Universities is in conformity with both Recommendations, with two exceptions: at the College of Surgeons the questions are set by a committee of not less than four of the examiners, taken in rotation; and at the University of London the examiners in each branch are responsible for their own papers, subject to the approval of the Senate. In Scotland, the two Colleges and the Universities of Edinburgh, Glasgow, and St. Andrews comply with the first, and all the licensing bodies with the second of these two Recommendations; in the Glasgow Faculty the questions in any subject are submitted to the examiners in that subject, and to the President, and if a difference of opinion arises as to the propriety of any question, an appeal may be made to the whole board of examiners; in Aberdeen the questions in each subject are set conjointly by the professor in that subject and the outside examiner. In Ireland, the practice of the College of Physicians is not in conformity with either Recommendation; in the College of Surgeons each examiner sends his questions to the chairman of the court, who, after ascertaining that no two questions are identical, sends them to the printer, and in doubtful cases the second Recommendation is complied with; in the Apothecaries' Hall the questions are submitted to the examiners who are considered "experts" in the several subjects, and the answers are submitted to *all* the examiners; and the University of Dublin "considers that there would be great difficulty in carrying out" either Recommendation.

24. Excellence in one or more subjects should not be allowed to compensate for failure in others. All the licensing bodies apparently conform practically with this regulation. But the English College of Surgeons states that "the practice is modified as explained in a letter to the Registrar dated January 7, 1876"; the Irish College of Physicians, that its practice is "conformable, so far as that excellence in one or more subjects does not compensate for failure in an important subject"; and the University of Dublin considers the Recommendation too vague to offer any opinion.

25. The examinations are to be held, except in special cases, at stated periods, to be publicly notified. All the licensing bodies comply with this.

26. That returns from the licensing bodies be made annually on January 1, in a prescribed form, to the Medical Council, stating the number of candidates who have been successful, and the number rejected, at each of the examinations. This is complied with by all the licensing bodies, except apparently the University of London, which replies: "Lists of candidates who have obtained registrable qualifications are forwarded as such qualifications are obtained."

THE WEEK.

TOPICS OF THE DAY.

The Hungarian Government have wisely determined that the wines of their country shall, as far as possible, be above suspicion, and they have accordingly recently issued most stringent regulations for the control of this trade. The sale of all colouring ingredients is forbidden under severe penalties. At all times wine merchants may be called upon to submit their stock to an official chemical analysis; and already two exporters of Hungarian wines have received notice of prosecution.

An inquest was held at Birmingham last week on the body of a woman who was poisoned through the carelessness of a chemist's assistant. The deceased was suffering from general debility and heart disease, and her medical attendant ordered her to take phosphorised cod-liver oil. Under this treatment she appeared to get better; subsequently, however, through a mistake of the chemist's assistant, "oleum phosphoratum" instead of cod-liver oil was supplied to the patient, who took three doses of it before the error was discovered. She then became worse, and died from the effects of the phosphorus. The jury returned a verdict of "Death from misadventure," and severely censured the chemist's assistant. We are informed that the bottle of oleum phosphoratum, as supplied by the wholesale chemist, was properly labelled in bold type, the dose being affixed.

On the authority of one of its foreign correspondents, the *Times* states that Professors Golgi and Raggi, of Pavia, have successfully resorted to transfusion of blood for anæmia in the case of a lunatic. Our only object in noticing this statement is to point out that even the "leading journal" is apt to get a little out of its depth when treating of matters medical, since it is gravely stated in the account of the foregoing case that the blood was injected into the "peritonitis"!

We have much satisfaction in being again able to record a severe sentence for the increasing traffic in bad meat. On Saturday last, at the Southwark Police-court, George Godbold and Charles Betts, butchers, were charged with having in their possession, and exposing for sale in Lambeth, a large quantity of diseased mutton, totally unfit for human food. The meat was seized by the sanitary inspectors of the Lambeth Vestry, and Dr. Archer Farr, the Medical Officer of Health for the district, attended to give evidence as to its unfitness for food. A farmer of Sunbury said that a few weeks ago he had a large number of Welsh sheep suffering from "rot." On the 3rd inst. both prisoners came to him and said they wanted to buy them for the Zoological Gardens. After some hesitation he consented to take 3s. 6d. a head for them, and they paid him £14 on account. They afterwards clandestinely removed the sheep. Mr. Bridge sentenced each of the prisoners to three months' imprisonment.

At the meeting of the Metropolitan Asylums Board, held last Saturday, the returns from the various small-pox and fever asylums showed that the former disease had increased during the past fortnight, but that the latter is diminishing among the classes from which patients are sent to these hospitals. At the Stockwell Asylum 31 fever patients had been admitted to the two buildings, 8 had died, and 53 had been discharged, leaving 193 under treatment, of whom 182 were suffering from scarlet fever, 3 from typhus, and 6 from enteric fever. There were only 8 fever patients remaining in the small-pox hospital, which will shortly be cleared and disinfected for the reception of small-pox patients, in the event of that disease spreading. At Homerton Fever Asylum 45 patients had been received in the fortnight, 2 had died, and 51 had been discharged, leaving under treatment 112 scarlet fever patients and 39 enteric fever cases. In Deptford Asylum there were 12 admissions and 3 deaths. The tota fever cases numbered 356, as against 390 in the previous fortnight. At Homerton 32 small-pox patients had been admitted during the fortnight, 3 had died, and 29 remained under treatment; at Fulham Asylum 36 had been admitted, 9 had died, and 13 had been discharged, leaving 51 under treatment; at Deptford Asylum 34 had been admitted, 7 had died, and 20 had been discharged, leaving 61 under treatment—a total admitted of 102, as against 56 in the previous fortnight. At the present moment the Board had accommodation for 291 more small-pox patients than those now under treatment. A letter was read from the School Board authorities with reference to the cases of fever brought from the training-ship *Shaftesbury* at Grays to the fever asylum at Homerton, and stating that arrangements had been made for the transfer of all such cases in future to the port sanitary ship, the *Rhin*, at Gravesend. A letter was also read from the Poplar Board of Works, stating that that Board would itself make provision for the treatment and reception of non-pauper cases of infectious diseases.

The Metropolitan Board of Works last week adopted a reply to the letter from the Home Secretary—on the subject of the provisions contained in the Metropolitan Street Improvements Act (1877) respecting the accommodation of the labouring classes dispersed by these improvements,—in which Mr. Cross declined to accede to the Board's request that he would exercise his power of releasing them from some of the obligations imposed upon them by the Act, especially from the prohibition to take fifteen houses or more occupied by labouring men and their families unless sufficient accommodation had been provided elsewhere for the number who would be displaced. The Board now urge him to reconsider this point, inasmuch as there is "every reason to fear not only a vastly increased expenditure, but an indefinite lapse of time before the improvements can be carried out, and, may be, a complete dead lock." The Board still hope that the Home Secretary will relax this restriction; but, failing this, they propose to bring the matter before Parliament in the shape of a Bill to amend the 33rd Section of the Act, and to obtain a full inquiry by a Select Committee into the whole matter.

There is no foundation for the rumour that the training-ship *Britannia* is unhealthy, or that the sanitary condition of Dartmouth Harbour is unsatisfactory. The recent death of a son of Mr. Sclater-Booth after only a few hours' illness is no doubt the cause of this rumour, but the disease in this case was congestion of the brain. At the present moment, out of about one hundred and forty cadets on board the *Britannia*, only five are stated to be on the sick-list, with complaints of the most trifling character.

The *Army and Navy Gazette* reports that the very handsome memorial to the late Surgeon-Major P. Shepherd, who fell at Isandlhwana, has just been finished by a firm of sculptors in the Euston-road. It is a massive tablet four feet high by three feet wide, of white marble on a black marble background, having an elegant raised border and carved runic ornaments in the upper part of the design. Underneath the inscription which records the name and age of the deceased, and the circumstances of his death, is the word "Isandlhwana" in bold raised letters. The monument, which is a tribute of respect from his brother officers, will be erected in the church of Leochel-Cushnie, his native parish in Aberdeenshire.

The mortality of London for the week ending 14th inst. was again excessive, the deaths, which numbered 2495, being 730 above the average of the corresponding week of the last ten years. The deaths included 12 from small-pox, 23 from

measles, 56 from scarlet fever, 13 from diphtheria, and 197 from whooping-cough. This disease also showed the largest proportional fatality in Salford and Newcastle-on-Tyne; but measles proved the most fatal disease in Nottingham and Hull; and scarlet fever in Sunderland, Bradford, and Bristol. During the week ending the 21st inst. the deaths in London numbered 2016, being equal to an annual death-rate of 28·7 per 1000. The fatal cases from fever rose to 23. The deaths from small-pox were again 13; and the number of small-pox patients in the Metropolitan Asylum hospitals rose to 139. No less than 58 new cases were admitted during the week, and, judging by the admissions to these hospitals, small-pox is more prevalent in London now than it has been since March last. Eleven deaths were referred to puerperal fever, and one of these occurred in Queen Charlotte's Lying-in Hospital. The deaths from diseases of the respiratory organs declined to 693, an excess of 213 above the corrected weekly average; 479 resulted from bronchitis, and 148 from pneumonia.

On the afternoon of Saturday, the 21st inst., a meeting was held in the Jerusalem Chamber, Westminster Abbey, under the presidency of Dean Stanley, in support of the Coffee Music-Halls Movement. Among those present were Mr. Cowper Temple, M.P., Sir C. Trevelyan, Lord and Lady Claud Hamilton, the Countess of Darnley, Lady Elizabeth Cust, Mr. W. E. Forster, Mr. Thomas Hughes, Mr. Clifford, and other persons of influence and note. Dean Stanley stated that the object of the Company was to promote, as far as possible, some better amusement and recreation for the people in connexion with the coffee-houses than could at present be found in the ordinary places of resort. Bad habits and temptations must be driven out by creating new ones; and in this respect the coffee-taverns had already done good work. The question was, how could they be made more useful. Several speakers addressed the meeting, and the following resolutions were passed:—"That the arrangements of the Coffee Music-Halls Company, which have been explained to the meeting, entitle it to approval and support on the ground of public usefulness," and "That it is desirable that musical entertainments for the people should be provided apart from the influence of alcoholic drinks and other existing temptations." The Company have already £2000 in hand, but want £8000 more before making a start, as they consider that a commencement on a small scale would be sure to prove a failure.

The Lower Thames Valley Main Drainage difficulty is again before the public. An inquiry was opened at Kingston on Tuesday last, before Mr. J. T. Harrison, C.E., Local Government Board Inspector, with Captain Hildyard, R.E., as assessor, into the merits of a scheme promoted by the Joint Sewerage Board of the Lower Thames Valley. The promoters were represented by Mr. Michel, Q.C., and Mr. Kenyon Parker; and the opponents appeared in great numbers, and were represented by various counsel, solicitors, or Parliamentary agents. The whole of the first day was occupied by Mr. Michel in stating the case of the promoters. The scheme is the same as that for which the Joint Board endeavoured to obtain the sanction of Parliament last year. Their Bill, it may be remembered, was rejected on the second reading.

THE GOVERNMENT AND DR. FARR.

In the House of Commons, on Monday last, the Chancellor of the Exchequer, in replying to Mr. Lyon Playfair's inquiry whether the Government had in any special way recognised Dr. Farr's services, said that some difficulty, arising out of a clause in the Superannuation Act, made great care and consideration necessary when a special pension was to be bestowed. But the Government proposed to give Dr. Farr a pension of £800 a year. Dr. Farr's salary was £1100 a year, but £300 of this was personal to Dr. Farr himself, while the salary attaching to his office, and which would be paid to any other person holding it, was £800 a year. That Dr. Farr's retiring pension should be the full pay of his office is perhaps as much as could be expected, though certainly no less ought to be thought of. But surely some other recognition of Dr. Farr's services may be looked for. It is by no means uncommon for her Majesty to bestow the distinction of the Companionship of the Bath on the permanent secretaries or other long-tried and trusted officials of Government offices, and it would be a gracious and graceful act were the eminent public services of Dr. Farr acknowledged in a similar way.

THE ARMY MEDICAL SERVICE.

The following is a list, in order of merit, of the thirty-five candidates who were successful for appointments as surgeons in her Majesty's British Medical Service at the competitive examination held in London on the 9th inst., with the number of marks obtained by each:—

	Marks.		Marks.
G. H. Sylvester	1925	J. S. Langdon	1350
W. J. Macnamara	1900	W. F. Heffernan	1345
D. O'Sullivan	1725	R. W. E. H. Nicholson	1345
E. O. Milward	1710	J. G. W. Crotts	1330
P. B. Conolly	1660	W. Dugdale	1325
C. R. Woods	1600	D. L. Irvine	1325
H. F. Babington	1585	J. Ronayne	1320
W. C. Milward	1575	C. H. Clabburn	1290
W. H. Bracken	1565	E. R. Cree	1275
M. F. Macnamara	1490	M. O'C. Drury	1260
J. O. Sandeford	1480	Freeman W. Deane	1245
R. L. Love	1455	J. H. Nicholas	1200
H. W. Murray	1455	D. F. Franklin	1175
M. W. Kerin	1420	J. L. Curtin	1160
A. Peterkin	1420	H. Saunders	1155
J. Harran	1405	J. Battersby	1150
W. S. Leckey	1395	A. V. Lane	1135
E. L. Maunsell	1375		

THE LATE DR. O'LEARY, M.P.

On Thursday, the 19th, the friends of the late Dr. O'Leary met at the residence of Dr. Lyons, Dublin, for the purpose of inaugurating a fund for the better provision of his children. Dr. Mapother, President of the Royal College of Surgeons, Ireland, having taken the chair, it was proposed by Dr. Lyons, and seconded by Mr. Porter, Surgeon to the Queen in Ireland—"That the professional services of the late Dr. O'Leary, his devotion to the sick poor, and the lamentable circumstances attending his sudden and unexpected death, before he was able to realise a provision for his family, entitle all its surviving members to the warmest sympathy and support of the public and the profession; and that a subscription-list be now opened to institute a fund to be specially reserved for the advancement of the family." The resolution was unanimously adopted, and two committees—one a medical, the other a general committee—were appointed to carry out the object of the resolution. The members of the medical committee are—the President of the College of Surgeons, Dr. Banks; Mr. Porter, Surgeon to the Queen; Drs. Kidd, Lyons, Cruise, Smyly, Mason, Hayden, Cryan, Davys (Swords); Mr. Kilgariff, Sir William Carroll, M.D., and Mr. Tufnell. The meeting was a success, and a sum of over £400, to which large additions have since been made, was subscribed on the spot.

THE WATER-SUPPLY BILLS.

The Liverpool Corporation Water Bill came on in the House of Commons for the second reading on Tuesday night, and met with considerable opposition; but, after some discussion, and on the suggestion of Mr. Sclater-Booth, the Bill

was read a second time, and then referred to a hybrid committee consisting of nine members, five to be nominated by the House and four by the committee of selection. On Monday Mr. Fawcett asked when the Bill relating to the water-supply of London would be introduced; and Mr. Cross replied that he expected all the details of the Bill would be arranged this week, and it would be introduced as soon as the Chancellor of the Exchequer could give a day for the purpose. Mr. Monk also asked whether the Government were prepared to institute an inquiry into the whole question of water-supply, in anticipation of legislation upon the subject. In reply, Mr. Sclater-Booth said that the question as to a preliminary inquiry had several times engaged the attention of the Government, but he thought that ample information was at their disposal should they think fit to deal with the subject.

THE INDIAN MEDICAL SERVICE.

The following is the list of the candidates who were successful at the competitive examinations held at Burlington House on February 9 and following days. Fifty-two candidates competed for twenty-three appointments. Forty-eight were reported qualified.

	Marks.		Marks.
J. Simpson	2470	T. R. Mulroney	1950
R. R. H. Whitwell	2395	W. B. Browning	1945
C. P. Lukis	2385	F. R. Divecha	1920
L. A. Waddell	2250	R. H. Canna	1907
H. P. Dimmock	2172	C. Henderson	1905
G. Sheevan	2060	D. F. Dymott	1900
C. B. Maitland	2040	C. M. Thompson	1870
C. C. Vaid	2040	A. P. Adams	1865
T. R. Macdonald	1981	J. W. Evans	1845
J. Clarke	1980	J. Leonard	1810
D. B. Spencer	1975	C. S. Rundle	1785
P. D. Pank	1965		

The first in the Queen's Service would have been fifteenth in the Indian List, and only two would have obtained places in it.

DIABETIC COMA.

Professor Quincke of Kiel contributes a paper on this subject to the *Berliner Klin. Wochenschrift*, No. 1, 1880, with pecial reference to a case of well-marked hereditary diabetes in a girl of sixteen, which terminated after several months' observation in the following way:—Two days before death he patient was suddenly seized in the early morning, after a very copious movement of the bowels, with great weakness and desire to sleep, which lasted the whole day. In the evening she became very excited and frightened, was delirious, and screamed loudly. She then gradually passed nto a state of stupor, at first answering when spoken sharply o, but afterwards becoming quite unconscious and incapable of swallowing, with very laboured respirations. In this tate she died. Professor Quincke considers that the term "diabetic coma," which was first introduced by Kussmaul (*Deutsches Archiv für Klin. Med.*, 1874), should be applied to the train of nervous symptoms just described. Kussmaul upposed that such symptoms depended on the presence of some poisonous material, probably acetone, in the blood. In he present case, uot only towards the end of the patient's life, but also several months earlier wheu she suffered from slcepiness and dyspnœa without objective lung symptoms, the urine on treatment with perchloride of iron became of the colour of red Burgundy winc, a reaction which has been supposed by Gerhardt and others to indicate the presence of diacetic ether ($C_6H_{10}O_3$) in diabetic urine. Professor Quincke, however, observed that the urine of his patient had not the characteristic smell of this ether, and further that while normal urine to which even $\frac{1}{1000}$ part of it had been added smelt distinctly, it was necessary to add more than one or two parts per thousand of the ether to the diabetic urine before it smelt at all. He concludes, therefore, that his patient's urine contained some substance which combined with the diacetic ether until saturated by the latter, but experiments showed that this substance was not an alkali, grape-sugar, nor one of the normal constituents of the urine. Professor Quincke has also found that though the physiological effects of diacetic ether on animals somewhat resemble, they are not precisely the same as the symptoms of so-called diabetic coma. Dogs, for example, become restless and stupid after large doses of the ether, and they suffer from well-marked dyspnœa with accelerated breathing, which persists until death. On the other hand, the ether does uot appear in the urine as such, uor does the breath, even after its injection into the blood, smell of it. He therefore regards the substance which causes the Burgundy-red colour with perchloride of iron in diabetic urine as one allied to diacetic ether, but not identical with it. He also remarks that since the symptoms of "diabetic coma" in the few hitherto reported cases vary considerably in character and in their degree of intensity, just as do those of uræmia, it is probable that, as in the analogous case of the latter condition, "it is not *one*, but several, substances which are formed in varying proportion by the abnormal tissue-change which is taking place, and by their accumulation lead to toxic effects, which, though capable of combination into one congruous picture, vary individually much more than, for example, the symptoms of poisoning by any particular alkaloid." The whole tenor of Professor Quincke's paper is to show how little we yet understand the true *rationale* of diabetic coma, and there is evidently a wide field open for investigation in this as in other branches of pathological chemistry.

THE STATISTICAL SOCIETY AND DR. FARR.

At a meeting of the Council of the Statistical Society, Sir Rawson W. Rawson, C.B., Vice-President, in the chair, it was resolved unanimously—"That the Council of the Statistical Society of London, being informed of the retirement of Dr. William Farr, F.R.S., from the position of Chief of the Statistical Department in the General Register Office, desire to express, on behalf of the Society, their high appreciation of the eminent services which he has rendered during more than forty years past to the progress of statistical science. A rare combination of mathematical, medical, and general scientific powers has been brought to bear with unflagging energy upon the advancement of inquiries essential to the happiness and progress of mankind. They may point, moreover, to the important part which he took in the conduct of the census inquiries of 1851, 1861, and 1871, as alone sufficient to entitle him to the lasting gratitude of his countrymen. Of this gratitude the Council feel that Dr. Farr may rest assured, and they also hope that the services of so eminent a public servant will not pass unhonoured by the State."

PATHOLOGICAL SOCIETY OF DUBLIN.

At the meeting of this Society on Saturday, February 21, Dr. E. H. Bennett, President, in the chair, Dr. J. W. Moore presented several of the viscera of a young man, aged seventeen, who died in the Meath Hospital on the nineteenth day of typhoid fever with all the symptoms of cerebral meningitis. There were neither rose-spots nor diarrhœa or other abdominal symptoms; and the diagnosis of typhoid fever was based on the history of the case, the age of the patient, and the presence of a continued fever running on into the third week. Among the final symptoms were ptosis of the right eyelid and complete dysphagia.

After death, several characteristic ulcerations were found in the terminal portion of the ileum; the mesenteric glands were soft, and swollen to some extent. The spleen weighed nine ounces. The kidneys were large, the right weighing six ounces, and the left six ounces and three-quarters. Parenchymatous nephritis apparently existed. The brain weighed sixty-five ounces. There was an abundant effusion of serum into the lateral ventricles, and the arachnoid at the base of the brain was slightly thickened and opaque. Some cheesy deposits were scattered throughout the lungs. The case illustrated the observation of the late Dr. Stokes, that the nervous, or cerebro-spinal, symptoms of continued fever are less often connected with decided organic change than those belonging to the digestive, respiratory, or circulatory systems. Dr. C. J. Nixon exhibited the heart, kidneys, etc., of a man aged sixty, who presented the phenomenon of Cheyne-Stokes's respiration in a marked degree. The area of præcordial dulness was increased, and there was a distinct double impulse. Ascending and descending respiration was very noticeable, and the pulse was quickened during the period of apnœa. After death, the liver was found nodular. There was advanced cirrhosis of the kidneys. Both lungs were in the sodden condition of advanced Bright's disease. The heart afforded a good example of "cor bovinum." The cardiac valves and the aorta were healthy. The chambers of the heart were hypertrophied and dilated. The cirrhosis of the kidneys was doubtless the first link in the chain of disease. The double cardiac impulse was probably caused by a dilated and hypertrophied left ventricle without structural change. The healthy state of the aorta showed that it had nothing to say to the production of the Cheyne-Stokes's respiration, which was a symptom caused by diminished reflex excitability of the respiratory nerve-centre. Dr. C. J. Nixon also showed some of the organs of a woman aged twenty-five, who had suffered from anæmia, followed by general dropsy and the development of a loud apex cardiac murmur. The lungs presented numerous and extensive hæmorrhagic infarctions. There was "villous" endocarditis, the mitral valve being considerably affected. The spleen was the seat of old infarctions undergoing caseous degeneration; its surface was very irregular.

THE ROYAL PORTSMOUTH, PORTSEA, AND GOSPORT HOSPITAL.

We learn from the local newspapers that the question is now, or will soon be, before the authorities of this Hospital, whether they ought to effect extensive improvements in the present building, or build an entirely new one on a different site. If the reports which have reached us regarding the existing site, sanitary arrangements, and general equipment of the present Hospital even fairly represent its shortcomings, we would earnestly advise the governors of the institution to think twice before endeavouring to patch up yet a little more the building now in use. They will also do well to consider whether, apart from all other considerations, it would not in the end be true economy to endeavour to provide, as soon as possible, a new building more in harmony, in its sanitary and other arrangements, with our modern views of proper hospital construction than the present, and to fix on a site the most eligible that can be secured for affording those advantages of a fresh and healthy atmosphere that are of so paramount importance both to medical and to surgical patients.

THE NEXT GENERAL ELECTION.

Mr. Bickersteth, of Liverpool, has been selected as the Conservative candidate for the honour of representing the United Universities of Edinburgh and St. Andrews in the next Parliament. Mr. Lyon Playfair, C.B., F.R.S., will stand for re-election; and the graduates of the Universities are already being actively canvassed by the committees of both candidates. Mr. Lyon Playfair holds the degree of LL.D., *honoris causâ*, from both Edinburgh and St. Andrews; and Mr. Bickersteth studied in the Medical School of Edinburgh, and is a Fellow of the Royal College of Surgeons of Edinburgh, as also of the Royal College of Surgeons of England. But the battle will be fought, we believe, mainly, if not entirely, on political grounds. The Council of the St. Andrews Graduates' Association have unanimously resolved that "it is not expedient that the Association should take an official part in the ensuing election of a member of Parliament for the conjoined Universities of Edinburgh and St. Andrews." Dr. Robert Farquharson, of London, and of Finzean, Aberdeenshire, has been chosen by the Liberal Committee of his division of the county as a candidate for the representation of West Aberdeenshire.

CONVEYANCES FOR THE SICK.

In the Northern Divisional Police-court, Dublin, on Saturday, February 21, the driver of a hackney outside car was summoned before Mr. C. J. O'Donel, presiding magistrate for having on the 5th inst. not taken immediate steps for the disinfection of his car after he had driven a small-pox patient to the Hardwicke Hospital, he having been informed of the nature of the disease from which the patient was suffering. It was clearly proved that the car-driver had been told at the Hospital that the patient had small-pox, and that the car was found on the Mountjoy-street stand between three and four o'clock in the afternoon. The defendant admitted the offence, and pleaded that he did not know the man had small-pox when he drove him to the Hospital. Mr. O'Donel said he had not the slightest sympathy with the defendant, and he would fine him £5 in accordance with Section 143 of the Public Health (Ireland) Act, 1878. If the Act provided for a fine of £10 or £20, he would inflict it. Defendant asked for time to pay the fine. Mr. O'Donel gave him a week to do so. We congratulate the Hospital authorities on the action they took in this case, and the magistrate on the firmness with which he set his face against making any reduction in the penalty allowed to be imposed by law for so dangerous an offence.

MEDICAL PARLIAMENTARY AFFAIRS.

Artisans and Labourers' Dwellings Improvement (Scotland).—In the House of Lords, on Thursday, February 19, Earl Beauchamp moved the second reading of the amendment of the Artisans and Labourers' Dwellings Improvement Act for Scotland. It provides for the construction of buildings and enlargement of areas by the local authority, with a view to improve the health and enlarge the accommodation for the working-classes. The Bill was not opposed.

Trichinosis on Board the "Cornwall."—Lord Thurlow asked whether it was true that an outbreak of this disease had occurred on board the reformatory school-ship *Cornwall*, lying off Purfleet, and also as to the extent of the disease and its fatality. He desired to know whether any precautions had been taken to prevent its spread, and if orders had been given to prevent the importation from abroad of pork infected with this disease. It is to be feared that cooking does not afford a sufficient safeguard, as a higher temperature is required than that ordinarily used in cooking. Earl Beauchamp replied that the matter had been for some time under the consideration of the Government; a careful inquiry had been instituted, but the reports had not been sent to the Home Secretary.

Adulteration of Tea.—In the House of Commons, on Friday, February 18, some remarks were made upon the imperfections of the methods of detecting fraudulent adulteration of tea, and the need for fresh powers to check the traffic in unwholesome and rotten teas.

THE MANCHESTER CHILDREN'S HOSPITAL CASE.

Facts would seem to indicate that all useful purposes arising from the discussion which originated in the unfortunate occurrences at this Hospital have nearly been attained. No good can now, unfortunately, come of it to Dr. Humphreys, and as the governors of the institution seem inclined to put their house in order it may be as well to allow them to do so in peace. We this week publish and republish certain letters on the subject, but we are rapidly approaching what must be the limits of the controversy, except we can see our way clear to the advancement thereby of some good aim or the attainment of some good end.

Letter from Dr. D. J. Leech.

[To the Editor of the Medical Times and Gazette.]

Sir,—I am unwilling to prolong the Pendlebury Hospital controversy, but I cannot allow one paragraph in Dr. Borchardt's letter to pass unnoticed. In it he intimates that Dr. Humphreys purposely insulted him, and showed ill feeling by introducing into the report sentences criticising his action in a former year. Dr. Humphreys has repeatedly assured me, as he has assured many others, that the sentences alluded to were written without the slightest intention of insulting Dr. Borchardt, or showing ill-feeling towards him; that when the meaning they might bear was pointed out, he most gladly withdrew them, and expressed regret that he had proposed to insert them.

The implacable spirit with which Dr. Borchardt confesses he received the apologies freely tendered to him will go far to explain the recent prevalence of discord at Pendlebury. Dr. Humphreys' health prevents his taking farther part in the correspondence which his suspension has excited, but I trust you will allow me, for him, to correct the impression which Dr. Borchardt's letter might give rise to—that he had willingly "loosened the screw." I am, &c.,

96, Mosley-street, February 24. D. J. Leech.

Letter from Dr. J. Thorburn.

[To the Editor of the Manchester Examiner and Times.]

Sir,—I am very loth to add anything more to this painful correspondence, or to take any personal share in it. I trust, however, that my contribution may be considered as an effort to pour oil upon the troubled waters. Finding that there is still a prevalent impression that the action of the Hospital Board must have been due to some much graver offence on Dr. Humphreys' part than that which is openly alleged, I took the liberty of asking Mr. Oliver Heywood to contradict it in public. My note to him was not intended for publication, and I had no wish that my name should in any way be introduced into the matter. Mr. Heywood's reply is, however, so characteristic of himself, and puts an end so thoroughly to any such injurious reports, that I cannot refrain from using the permission which he gives me to make it public. I am sure that it will tend to allay much of the irritation felt among the profession as well as outside of it. I am, &c., J. Thorburn.

"J. Thorburn, Esq., M.D.—Dear Sir,—I have to acknowledge the receipt of your letter of the 17th inst., and to thank you for the courteous and kindly terms in which you refer to a painful subject. You tell me that there exists an impression that Dr. Humphreys was guilty of some grave moral delinquency at the Children's Hospital, which is charitably kept in the background, and you instance one gentleman (evidently well disposed towards myself) who is unwilling to believe that, save for such cause, I should have countenanced the measures that have been taken. I cannot so shelter myself at the cost of Dr. Humphreys' reputation. There is no such charge against him as that which appears to be surmised—emphatically, none. Your letter gives me the first intimation of its supposed existence, and causes me great pain. It is to lighten the burden of Dr. Humphreys' trouble that my thoughts are now directed, and you are at liberty to use this communication in such wise as you may think best to promote this end. Faithfully yours,

"Claremont, Feb. 20." "Oliver Heywood.

Letter from Dr. C. A. Rayne.

[To the Editor of the Medical Times and Gazette.]

Sir,—Dr. Borchardt, in your last week's number, publishes a letter in which he refers to your editorial remarks regarding statements of mine made in the *Manchester Examiner* and in the *Manchester Guardian*. My letters (which he describes as the "attacks" upon himself of a "man with a grievance") contain simply a statement of the facts regarding the termination of my connexion with the Pendlebury Hospital. To the first of these letters he replied, but carefully avoided the main point at issue—viz., that the action of the Board towards me was confessedly due to certain statements made by him regarding me, into the truth of which no inquiry was made; that I strove in vain to obtain a hearing before the Board and an investigation of the whole matter; and that he was able to prevent my obtaining this simple act of justice. If these are not facts, let Dr. Borchardt contradict them.

My second letter called attention to this omission, and brought forward further corroborative evidence. To this he has made no reply.

If Dr. Borchardt could have met my statements, he would no doubt have done so at the first. But, as it appears that he cannot meet them, I venture to think that the profession will not be misled by his assigning such a very transparent reason for his not doing so as they are not "worth answering." Such an argument will deceive no one.

I am, &c., Chas. A. Rayne,
Late Assistant-Physician to the Children's
Devonport, February 24. Hospital, Pendlebury.

PRESIDENTIAL ADDRESS.
AT THE
ASSOCIATION OF SURGEONS PRACTISING DENTAL SURGERY.

Delivered on Wednesday, February 18, 1880.

By W. A. N. CATTLIN, F.R.C.S.

After expressing the gratification he felt at having been elected "to preside over the only Society of Dentists which has been formed in this country composed entirely of educated surgeons," Mr. Cattlin said that his sense of the honour thus done him was greatly increased by the fact that it is not the custom for learned societies holding their meetings in London to elect a President residing, as he does, in the provinces. He had intended to address the Association on the Modern History of Dental Reform, but the President of the Odontological Society had rather forestalled him in an address delivered to that body just lately. Still, though differing from that gentleman "in some of his most cogent arguments," he should keep the same subject in view; and he went on to say: Comparing our own branch with the parent tree, I shall endeavour to show you, as we proceed, that both medical and dental science have had their days of darkness, error, and delay: and indeed, if we may judge from recent discoveries, science, in its general sense, is only just expanding to the light of modern times. The learned President of the Odontological Society is *perfectly* satisfied that "the coping-stone" has been put upon dental reform, and that education, examination, and legislation as applied to dentistry are now "thorough"! He also considers that by the Dentists Act, dentistry, as a profession, is for the first time affiliated to the Royal College of Surgeons and its noble profession. If so I am naturally tempted to ask how it happens that this promising child, if legitimate, is kept in a home of its own, the Dentists' Register, and not admitted into its father's mansion, the Medical Register? The other night I had a dream—forgive me if I speak figuratively,—when more than five thousand dentists thronged around my bed in different costumes. The large majority were busy with their aprons on, screwing down little iron frames, just as the undertaker does his wooden box; others were cooking in new-fashioned style by gas and steam; others again were stamping gold, and setting teeth upon it, ever and anon puffing and blowing like an engine-pipe. A

few were dressed as gentlemen, with a small mirror or forceps in their hands, the latter with a spot of blood upon it. Some were polite, and some were not, *but all by law were equal.* Some complained about the dirt and noise the others made, their want of scholarship, etc.; and altercation followed altercation, until a fight arose, and, just as happened in the upper heavens, the wiser won, and drove the others out of their community.

"Is this a dream?—then waking would be pain;
Oh! do not wake me; let me dream again."

As medical politics still force themselves upon us, it may be amusing, as well as instructive, to confine our thoughts for a short time to the consideration of the early struggles which hindered the development of some of the medical colleges. Should we be driven to found an institution of our own, let us be forewarned that changes of great importance cannot suddenly be made, and, although we live in days of rapid progress, great undertakings will require the fostering hand of time to perfect them. The College of Physicians was at one time a very exclusive body; it is now a hall of courteous gentlemen. From being stiff and unyielding, it has bent as readily to the spirit of the times as any other institution. One of the greatest obstructions with which the College of Surgeons had to contend in its early educational department was the repugnance of the public to be anatomised. So difficult was it even to obtain small portions of the human frame for dissection, that thin bodies with thick heads would probably at that time have been worth most in a moribund condition. It is a little humiliating to be reminded of the time of a body-snatcher named Burke, who, with accomplices, actually suffocated people in the streets, and carried them when scarcely cold into the dissecting-rooms. Parts of the human body were, moreover, hawked in various private surgeries, and the dead were raised from the graves, but not in the living state. So great has been the success of the Anatomy Act, that every difficulty in this respect has been removed, and the public now live and die in peace, and have derived incalculable benefits from the better education of the medical students. Indeed, so great has been the change, that the best subjects are now of comparatively little value. There was a time, not many years ago, when the first surgeons of the day boasted of their ignorance of medicine; when most difficult operations were performed with the utmost skill, yet the risk of life was great during the after-treatment. Thanks to the knowledge of medicine possessed by such men as the late Sir Benjamin C. Brodie, and that model of British surgeons, Sir James Paget, this blot upon common sense has been removed. From the same cause it has fallen to my lot to witness much unnecessary suffering, wasted health, and even death, from ignorance in the practice of dental surgery. If we go back to the year 1815, when the apothecaries of England and Wales obtained their Act of Parliament, and began to remove the main obstruction to their progress, we shall perhaps find an example in them which we may imitate. At that time the majority kept open shops, and sold pink saucers, smelling-bottles, brushes, drugs, and chemicals; and were really more vendors of medicines than medical practitioners. According to Shakespeare they were far from being a wealthy class. Feeling their degraded position (for the physicians of that day scarcely condescended to consult with an apothecary), they set to work in right good earnest to improve themselves. The law not being retrospective, the more uneducated were allowed to remain in practice upon very slender evidence of their skill, until they were extinguished by effluxion of time. The better men, whilst using the powers of their new Act to prevent empirical practice, instituted most creditable examinations, the severity of which was gradually increased until the Apothecaries' licence became one of the best, if not *the* best, test of medical knowledge. The public, as well as the medical mind, by slow degrees became convinced that medicine in its broad sense included surgery; and hence arose the superior class of general practitioners who now hold the double qualification. As education increased, the custom of charging exclusively for medicines became distasteful, and to meet a rising want in this respect the druggists improved themselves, and have become the chief dispensers of medicines. It is indeed curious to note how gradually every improvement in the medical profession has taken place, and how certainly every requirement has been supplied. Let us hope that the same good fortune may happen to ourselves! For some time past the great scheme of conducting one *thorough* examination as a test for medicine and surgery, within one portal, has been growing into popularity, and the signs of the times plainly indicate that such a system is about to become the law. Thus far since the year 1815 the object of the Legislature has been, and now is, to consolidate the different classes of medical practitioners, and equalise medical education; and it is much to be lamented that the Dentists Act should have been passed just at this crisis, as it is a strange contradiction of the whole scheme. With these examples before us, let us deliberately consider whether our own history differs materially from them. Like the apothecaries, we cannot boast of a high pedigree, and, like them, our advancement has been slow and gradual; but we have not yet progressed so far. The first grand effort in the shape of progression was made about twenty-four years ago by the formation of the Odontological Society, and it is almost impossible to estimate the amount of good by example and precept which that one Society has done. Its last proceedings have, however, stultified its former acts. The Dental Hospital, the late College of Dentists, the dental licence, and our own Association, have all in their particular way contributed to the improvement which is evident and noticeable in our ranks. Show-cases, like the apothecaries' shops, will gradually disappear; advertisements are both less frequent and less vulgar; and I believe the amount of scientific knowledge which dental surgeons have contributed to the general stock of literature will bear favourable comparison with that of any other specialty. All was proceeding well with dentistry until the Dentists Act, in 1878, fell like a withering storm and cut it from the parent tree. Looking earnestly at the present position of medical politics, and the wide difference of opinion which prevails among different grades of dental practitioners, I am led to think that the hour of danger has arrived, and that this Association will have an anxious duty to perform during the present session of Parliament. Hasty legislation has led to difficulties of a serious character. The Dentists' Register practically separates dentistry from surgery, and, in my opinion is an error of the highest magnitude. Its blighting influence will be more apparent as time rolls on. It will scarcely be believed that if a surgeon (who may or may not be a dental licentiate) declines upon principle to register his name in the Dental Register, he is, by Clauses XIX. and XXVIII. of the Dentists Act, deprived of the privilege of serving as an examiner upon the dental board of his own College, unless he sits—which is highly improbable—as one of its surgical members. Probably this flaw is an oversight, and will be altered as soon as the mistake is pointed out. Our sub-committee appointed some time ago will watch the progress of the Medical Act Amendment Bill, and, if possible, prevent the abuse of medical titles. They will again urge the Legislature to forbid unqualified persons to use the title of "surgeon" or "physician," either alone or in conjunction with any other word or words. Still, the question meets us at every turn, What further action ought this Society to take under existing circumstances? Unless some effectual step is *quickly* taken, dentists as a body will be isolated and, I fear, compelled to found a college of their own. In that case, by the constitution of fellows and members some scheme might be arranged for the gradual separation of the surgical from the mechanical branch, thus imitating the old apothecaries by casting off the detrimental shop. It is to be regretted that out of 5289 names which appear in the Dentists' Register, only 533 have given positive evidence of either a medical or dental education. If the Dentists Act be allowed to remain unrepealed, what security is there that practitioners of other branches of surgery will not apply for and obtain a similar statute? If the Dentists Act be repealed—and I heartily hope it will be,—then, to prevent a repetition of the evil, it has been suggested that when the proposed Conjoint Examining Board is formed, a candidate should notify that, in addition to the ordinary examination of a medical practitioner, he desires to be examined particularly as to his proficiency in dental, aural, ocular, orthopædic, or any other branch of surgery, and if he shall show a thorough knowledge of any such branch, a certificate to that effect should be appended to his diploma, and he should be allowed to appear in the Medical Register as practising that specialty. This certificate would not exclude him from general practice,

because, being fully qualified in every respect, he would be entitled to practise one or every branch. In any and every case those possessing the dental licence should be encouraged to complete their surgical education, and for that purpose great facilities should be given to them during the next three years. They are the cream of the rising generation of dentists, their guiding stars of future hope! If a little learning is a dangerous thiug, and if it be true of all professions that he who is only half educated can only be half trusted, then the dental licentiates will be most unwise if they remain in their present anomalous position. Finally, I should like to see established in this great metropolis consulting practitioners, who, ripe with experience, but not dim with age, would throw a halo of respectability around the whole profession. If they would arrange to meet their brethren in the surgeries I believe they would frequently be consulted by them, as well as by members of the medical profession. During the progress of the Dental Practitioners Bill I had an interview with its chief promoter, Mr. Tomes, a name worthily honoured as that of a scientific dentist. I hope, like myself, he was afflicted with mental colour-blindness, and did not at that time see the mischievous tendencies of this Bill. If otherwise, not even the glory of having received two public testimonials will save his high reputation from the blame of having inflicted a *great* injury upon some of the best men in his own profession. My amiable rival, the President of the Odontological Society, pointing his remarks straight at this Association, has thrown the gauntlet of defiance down by asserting that "they who had the power to carry the Dentists Act have also the power to maintain it." On behalf of this Association I reply—

> "Thrice is he armed who has his quarrel just;
> And he but naked, though locked up in steel,
> Whose conscience by injustice is corrupted."

It does not quite accord with my ideas of brotherly fairness to indulge in terms of general complaint without delivering a bill of indictment, and, if possible, suggesting some remedy which might help to heal any of the sores from which fellows of this Association are smarting. I will therefore, in my individual capacity, say candidly what course I think it would be wise to pursue in order to repel the serious charge which may now be brought against dentists, of being the first to sow the seed of discord, and of unnecessarily tearing a useful branch from the glorious old tree of medical science, and that too after its roots had been pruned, and just when its branches were about to be trimmed and gathered into harmonious unity by the conjoint scheme. Those who have done this, and assisted to do this, can but make amends by retracing their steps. I would therefore suggest that the worst clauses of the Dentists Act should be repealed, and that only enough of it should remain to authorise dentists who were in practice prior to August 1, 1879, and such others as are not yet ripe for medical registration. All qualified practitioners now on the Dental Register I would carry as fast as I could to the Medical Register, and for the future adopt the scheme which has been suggested by my son, Mr. W. Cattlin, for the benefit of all specialists in any branch of either medicine or surgery. Should any of the "qualified" desire to remain on the Dental Register to die out by effluxion of time with the "unqualified," I would leave them alone in their glory, and keep them warm under the very "coping-stone" of reform of which my friendly rival is so proud, until the dream I mentioned to you is fully realised. It will, I am sure, be the pride of our Association to promote any good object, whether originated by ourselves or not, and especially to hold out the right hand of fellowship to those who, though differing with us in opinion on minor matters, may show a readiness to work with us for the general good. I thank you for the attentive manner in which you have listened to my remarks, which, on account of *urgency*, have been confined almost entirely to the politics of our profession. Even should the civil war which has begun last the whole of my presidency, rest assured that the scientific department of the Society shall not be neglected.

Epsom College.—At an open competition for studentships at Christ Church, Oxford, last week, both the studentships in Natural Science were gained by pupils of the Royal Medical College, Epsom—T. H. Walker and H. J. Mackinder.

FROM ABROAD.

Hypertrophy and Dilatation of the Ventricles of the Heart.

Dr. Du Castel (Chef des Travaux Anatomiques à l'Hopital Necker) terminates a memoir (*Archives Générales*, January), entitled "Researches on Hypertrophy and Dilatation of the Ventricles of the Heart," with the following conclusions:—

"1. The different facts just passed in review establish once more that the dimensions of the heart, even in the normal state, oscillate within very broad limits. 2. The weight of the heart increases with age; and this, so to say, physiological hypertrophy offers this peculiarity, that it influences nearly equally both ventricles, so that the relation of one to the other remains nearly constantly the same—the left always weighing nearly twice and a half as heavy as the right, in the normal condition. 3. The capacity of the ventricles, in the healthy condition, is so variable that it seems nearly impossible to fix the normal capacity of the heart. All that seems allowable to be said is, that the capacity of the right ventricle is more considerable in the adult than that of the left, without any constant proportion existing between them. 4. This predominance of the right ventricle tends to become effaced with the progress of age—the capacity of the left heart approaching progressively more and more that of the right, which in old age it may equal or even exceed. 5. This variation in the normal dimensions and proportions of the heart renders the apprcciation of pathological modification difficult. Still, in chronic affections, modifications which are easily appreciable are observed. 6. The hypertrophy which, as we have seen, is produced in the physiological condition and by the progress of age, is also often observed under pathological conditions; but while in the former case the two sides of the heart take an equal part in the development of the organ, and maintain their normal relations, in the latter the hypertrophy exclusively or predominantly affects one of the ventricles, destroying the normal relations. 7. Hypertrophy of the left ventricle is that which is most frequently observed, this being very marked in certain cardiac affections, aortic contraction and insufficiency, and mitral insufficiency; also in disease of the aorta, especially atheroma; but it seems to attain its highest development in extra-cardiac affections, as, for example, in interstitial nephritis. 8. Hypertrophy of the right ventricle is the habitual consequence of that of the left, with which it almost always co-exists in a greater or less degree, then constituting a secondary accident, probably due to hypertrophy of the commissural fibres. This hypertrophy is never sufficient to maintain the two sides of the heart in their normal proportions. 9. But hypertrophy of the right ventricle may also exist independently of that of the left, as is observed in mitral contraction, chronic pulmonary affections, emphysema, and pleural adhesions. Its existence in tuberculosis is rare and but little marked. 10. Atrophy and differences of capacity are difficult of appreciation. Still, dilatation of the left ventricle is manifest in the aged, in subjects of atheroma, in aortic and mitral insufficiency, and as a sequence in most interstitial nephrites. Atrophy, and perhaps also retraction, would seem also to be possible in advanced cachexia, especially when its evolution is slow. 11. Dilatation of the right heart in chronic pulmonary affections and diseases of the heart does not seem to occur in proportions considerable enough to appreciate its importance. 12. Dilatation and hypertrophy may be developed simultaneously, but their co-existence is not constant. When this exists the progress of the two phenomena is not habitually parallel. 13. Hypertrophy of the ventricle may, however, sometimes require a certain degree of development without any dilatation of the cavities; and it may even co-exist with a certain degree of diminution of capacity, thus constituting true concentric hypertrophy. In this case the hypertrophied and more voluminous columnæ, by occupying a larger space within the interior of the cavity, probably contribute a considerable part to the diminution of the capacity."

Action of Alcohol on Digestion.

At the meeting of the Biological Society on February 14 (*Gaz. des Hop.*, February 17) M. Levcu stated that if 200 grammes of cooked meat be given together with seventy-five

grammes of brandy to a dog of medium size, and which is killed five hours afterwards, the 200 grammes of meat will be found in the stomach. The alimentary bolus is intact; the meat is quite undigested; and the external surface of the stomach is red and congested. The stomach also contains 160 grammes of a clear, transparent, slightly acidulated (one gramme ninety centigrammes of muriatic acid per litre) liquid, in which is found no pepsin, and with which no digestion can be effected. It is probably the result of an aqueous exosmosis produced under the influence of irritation of the mucous membrane of the stomach; there is no trace of alcohol in this liquid. Brandy given in excess, therefore, irritates the stomach without in any manner favouring digestion. If the mucous membrane of the stomach be removed, digestions can be just as well effected with the submucous membrane as with the mucous membrane itself.

But if 200 grammes of meat be given to a dog with only twenty-five grammes of brandy, a very different state of things prevails. Five hours afterwards only fifty grammes of the meat will be found, and although the stomach is congested it is so in a far less degree than in the former experiment. The liquid found in the stomach, too, is far more acid, containing two grammes forty-two centigrammes to the litre. Brandy in this proportion, then, exerts a very powerful digestive power. If digestions are performed by means of the mucous membrane, two grammes of this membrane will be required to digest five grammes of fibrin, while in the former case scarcely one gramme would be required—the mucous membrane after the second experiment possessing therefore less digestive power than that after the first. If with the 200 grammes of meat 150 grammes of wine be given, the same effects are produced as with thirty grammes of brandy. If 300 grammes of wine be given, only forty grammes of meat will be found five hours afterwards, three grammes of mucous membrane will be required to digest five of fibrin, and the proportion of acid is increased to four grammes and a half per litre.

Brandy or wine, therefore, increases the activity of digestion, but only on the condition of not being given in excessive doses. Prof. Paul Bert observed that digestion is retarded even by small doses of alcohol during the first two hours, but after it has been absorbed it produces a general nervous excitement which is favourable to digestion. This may be exemplified by giving it greatly diluted with water.

The University of Geneva.—For the present winter session there are 525 students, distributed as follows:—Faculty of Sciences 106, Letters 208, Philosophy 35, Theology 15, Laws 54, and Medicine 107. Of the total number 200 are Genevese, 125 others Swiss, and 200 foreigners. The total exceeds that of 1879 by 134. In 1870 there were 97 students and 74 auditors—total, 171; and in 1878, 183 students and 298 auditors—total, 391. This present session there has been an increase of 29 students and 105 auditors—total, 134.—*Lyon Méd.*, February 15.

Army Medical Department.—The *Gazette* of Tuesday last signified that the following officers of the Army Medical Department have been promoted to the new rank of Brigade-Surgeon:—The following officers to be Brigade-Surgeons:—Surgeons-Major Herbert Taylor Reade, V.C.; John Lyster Jameson; John Phillips Cunningham, M.D.; John O'Nial; Thomas William Fox, M.B.; Joseph Coleman Hornsby Wright, M.D.; Johnston Ferguson; John Ogilvy, M.D.; William Stewart, M.D.; James Arthur Hanbury, M.B.; Duncan Alexander Campbell Fraser, M.D.; Frederick William Moore; William Marshall Webb; John B. Cole Reade; Edward Malcolm Sinclair, M.D.; William Cattell; James Ekin, M.B.; James Hannan; Edward Louis Lundy; Thos. John Murphy, M.D.; Alexander Guthrie, M.D.; Edwd. Young Kellett; Robert Augustus Chapple; Adam Graham Young; Robert Wyatt Meadows; Richard Hungerford; Leonard Kidd, M.B.; John Tulloch, M.D.; Wallace Haward; Thomas Tarrant, M.D.; Exham Long Hiffernan; Alexander Dudgeon Gulland, M.D.; Thomas Teevan; John Sparrow; Richard Chapman Lofthouse, M.D.; Joseph John Thompson; Rowland Wimburn Carter; Richard Wolseley, M.D.; William Ramsay Steuart; John Low Erskine, M.D.; Wm. Macnamara, M.D.; Augustus Patrick Meyers Corbett, M.D.; Thos. Smith Hollingsworth; Jeffery Allen Marston, M.D.; Andrew Semple, M.D.; William Carden Roe; George Monlas Slaughter; John Wild Hulseberg; Sampson Rock.

REVIEWS.

Ocular Therapeutics. By L. de Wecker. Translated and edited by Lytton Forbes, M.A., M.D. London: Smith, Elder, and Co. 1879. Pp. 552.

The name of M. de Wecker, as the author of a special work on the subject of Ocular Therapeutics, is at once an ample guarantee of its excellence, inasmuch as his own contributions to that department of ophthalmic medicine are so numerous and of such a kind as to have already added considerably to its progress and improvement. It needs but a brief acquaintance with the present volume to be convinced how completely he has fulfilled his task; and how much information, both old and new, concerning the various methods of the treatment of eye disease is contained therein, conveyed to the reader in so attractive a style as to render its perusal both pleasant and profitable. To render the study of the subject more complete, the discussion of the treatment of each disease is preceded by a brief description of it, pathologically and clinically, in so far as they are mutually related. As examples of some of the more recent additions to the therapeutics of the eye, which are here adequately discussed, and which characteristically demonstrate the progress that has taken place, we may enumerate the adaptation of the antiseptic method, or method of treatment by disinfectants, to the diseases now recognised as resulting from direct local or general infection, the extended use of eserine for reducing tension and checking diapedesis, the substitution of duboisine in cases where atropine is not readily borne, the employment of pilocarpine by subcutaneous injection, the revised methods of treating secondary cataract after extraction, and many others. As far as possible, the pharmaceutical combinations have been adapted to the method of prescribing in vogue in this country; leaving, however, some few preparations the complicated formulæ of which deprive them of their usefulness.

The external diseases of the eye are treated exhaustively in the earlier chapters of the volume. In dealing with obstinate, long-standing secondary ulcerations about the eyelids, M. de Wecker recommends a very active treatment by enemata of iodide of potassium, mercury inunction, the subcutaneous injection of pilocarpine, and skin-grafting as soon as a granulating surface is obtained. The latter procedure appears somewhat of a favourite one, for in burns the granulating surface left by the shedding of the eschar is recommended to be covered by a complete mosaic-work of skin-grafts. The treatment advocated for malignant ulceration of the same locality is much less rigorous. Whilst adopting a radical method of removal by knife, preference is given to a specific treatment laid down by M. Bergeron, by means of the local application and internal administration of chlorate of potassium. We cannot but think that the apparent efficacy of such a treatment will be explained by the very chronic course which many of these cases run, if left to nature. In the lectures on affections of the conjunctiva the distinction between croupous and diphtheritic conjunctivitis, already laid down many years ago, is clearly defined and upheld; and the treatment of the latter which is recommended—although all treatment is regarded as eminently unsatisfactory—consists of protecting the sound eye, employing warm or cold carbolic applications according to the amount of purulent discharge, and the topical use of a 10 per cent. solution of salicylic acid. Whilst the most efficacious manner of cutting short the period of infection is the rapid mercurialisation of the patient by means of inunction, of calomel internally, and of frictions of mercurial ointment over the forehead.

The treatment of affections of the cornea has of late years undergone much change. In the practice of M. de Wecker, atropine, previously so extensively employed, has been almost entirely supplanted by eserine; in fact, throughout the whole of the lectures devoted to a consideration of these diseases, the only mention of the use of atropine refers to those cases in which complications of the anterior portion of the uveal tract exist, as iritis or cyclitis. With this exception, the use of eserine is universal. When we consider the influence exerted by this alkaloid in lowering the tension of the globe, and thus lessening the tendency to the formation of those staphylomatous protrusions which are so detrimental after perforating ulcer and inducing

cicatrisation by flattened cicatrices, and also its power in checking diapedesis, and, by that means, inflammatory exudation into the tissues of the cornea, this substitution appears unavoidable. The subject of rodent or infecting ulcer of the cornea is most fully discussed. Regarded as the result of local infection through the medium of decomposing secretions, the treatment adopted is the constant removal and disinfection of those decomposing secretions by carbolic compresses, and a free use of chlorinated water or salicylic acid in solution, and the instillation of eserine. As operative measures in these cases, preference is given, when the extent of ulcer is large, to a sclerotomy, the keratomy of M. Saemisch being limited to ulcers of small size; the latter operation being objected to by reason of the large corneal cicatrix left, and the liability of the iris to become adherent to its margins.

In the following chapters, treating of diseases affecting the iris, the use of atropine reassumes its former position. Even here examples occasionally occur where this drug appears to aggravate the existing symptoms and induce toxic effects. In these cases duboisine may be substituted with marked advantage. In iritis, reliance is also placed upon the injection of morphia, the use of chloral, and the operation of paracentesis of the anterior chamber, to ameliorate symptoms. The last is considered as a complete specific for the relief of pain, itself being a painless proceeding, and capable of being performed almost without the knowledge of the patient. In discussing the subject of sympathetic ophthalmia, immediate enucleation of the injured eye is advised, except in those cases where the loss of vision in the sympathetically inflamed is actually greater than that in the exciting eye. The latter, being the more perfect, should be retained, if possible, an attempt being made to save it by extraocular section of the ciliary nerves, close to the optic nerve. All operative measures on the eye affected with sympathetic inflammation are to be rigidly shunned, and attention chiefly directed to a mercurial treatment, injections of pilocarpine, eserine, and sclerotomy if glaucomatous symptoms ensue. No attempt is to be made to rectify the occlusion of the pupil until such a period of time has elapsed as to preclude any chance of the affection being re-established.

The chapters discussing cataract and its treatment comprise some of the most interesting in the volume, and contain a description of its varieties, diagnosis, complications, and treatment. With respect to the latter, M. de Wecker is now led to adopt by preference a modification of the linear operation, making a flap two millimetres in depth and falling exactly within the corneal border, grazing the conjunctival limbus, and followed by a small iridectomy. The utmost endeavours are taken to prevent entanglement of the iris in the wound by the instillation of eserine, and the exact replacement of the iris in position by the caoutchouc spatula. The use of atropine after extraction is almost entirely given up, and is only adopted when symptoms of irritability of the iris show themselves. The number of suppurations of cornea since this practice has been followed has markedly lessened, and varies from 1 to 3 per cent.

In the matter of secondary cataract and occluded pupil, the use of the scissor-forceps is strenuously recommended. A more extended experience of this instrument has, however, shown that where the iris is rendered incapable of contracting by reason of its atrophy, or the presence of dense exudation masses behind it, it fails to effect its object. When these conditions are present, some operators have ceased to employ this instrument, and have resorted to the operation of iridectomy and subsequent laceration by needles. To combat the difficulties presented by this class of cases, M. de Wecker recommends a combination of iritomy with iridectomy, by which a V-shaped piece of iris is removed.

The translation from the original has been admirably performed by Dr. Lytton Forbes. A closer revision of the proof-sheets would, however, doubtless have prevented the occurrence of several typographical and other errors, which are scattered here and there, and which disfigure, although they do not detract from the merit of, the book.

The Congress of German Surgeons.—The ninth Congress of the German Surgical Society will be held at Berlin from April 7 to 10, 1880.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, February 10.

John E. Erichsen, F.R.C.S., F.R.S., President, in the Chair.

The Antiseptic Theory tested by the Statistics of One Hundred Cases of Successful Ovariotomy.

Mr. Lawson Tait read a paper on the above subject. In commencing, the author referred to the purely empirical character of the basis of medical opinion generally, and the difficulty, even in surgery, of obtaining a physical basis of reasoning. He ventured to indicate a more definite line of research which he should apply to the antiseptic system, as being a theory practically now considered as one of the laws of biology. As far as we know, no phenomena of putrefaction occur without the admission of these so-called germs to the substance putrefying; and their origin in the putrefying fluid cannot yet be proved as an actual occurrence, for spontaneous generation can hardly be considered a part of the present process. He therefore assumed that the germ theory was substantiated, and that no process of putrefaction occurs except by the admission of resting or swarm spores of living organisms associated with putrefactive changes. Another point was that the materials on which experiments had been made have been dead, and no corresponding putrefactive changes have resulted from the admission of germs to living matter; for, as Dr. Roberts has stated, the hypodermic morphia-syringe will inoculate a sterilised solution of dead organic matter, but there are no putrefactive changes from it in the healthy body, and there is no evidence that the changes which occur in blood poisonings, even when of local origin, have any analogy with a putrefying dead infusion. For instance, in rotting and decaying fruit the minute forms of life are confined to the decaying parts. How, then, can the advocates of the germ theory assume that their invasion is the cause of the decadence of vital phenomena, while it appears that such decadence, due to some unknown cause, is that which gives the germs their potential ascendency, and enables them to do what during full vital action they could not effect? If the views of the germ theorists were correct, no surgical operation could be successful without rigid antiseptic precautions, and cut should be followed by septic poisoning, and surgery must long since have become an extinct art. The three factors on which the operating surgeon finds his success to depend are —the condition of the patient, the condition of his surroundings, and the nature and extent of the operation. In the author's special operation of ovariotomy, apparent perfect health was not a certain indication of power to resist septic poisoning. The surroundings of the patient contained elements of far greater certainty, as shown statistically, in the danger from density of population; and in the third factor the fatality of major operations as compared to minor—*e.g.*, an amputation of the thigh as compared with that of a finger —seemed opposed to the legitimacy of the germ theory, and its powers as a cause in surgical mortality must be much exceeded by the power of vital resistance in the tissues, and the extent of the operation. The author illustrated the point by a case of trivial operation never known to result fatally, in which he had seen a hundred minutes occupied in antiseptic precautions for what could itself be performed in three; and his conclusion was that in minor operations germs have no influence, and in major, that the condition of the patient to resist their influence was of the most importance. The author admitted the difficulties connected with what constitutes a major operation, and with the different rates of mortality in such operations, and the necessity therefore for conducting the examination by the careful grouping of similar accidents together. Statistics by themselves could not prove anything, but they could be made to show the direction in which individual analysis should be made. One of the dangers of antiseptic surgery appeared to be that it was thought that many operations hitherto considered impossible might be undertaken safely under its influence, and that as a road to surgical success it placed the skilled and the inexperienced on a common

level, but he feared there had been better lessons learned, showing that an antiseptic spray would not compensate for the want of manipulative dexterity. He thought also there was great risk of the condition of the patient and his surroundings being overlooked in an inattention to general hygiene. The advance of surgery, as shown in the case of ovariotomy before antisepticism was applied, must have some credit given to it in the matter, and in the careful analysis required no rough aggregate of operative results could be of use, but in a particular operation such as ovariotomy these results pointed in the direction of important and profitable research. In ovariotomy a large group of a hundred cases must present more features similar to another hundred, from the same attention to minute details, and the same state of the surroundings common to both groups, than probably in any other surgical operation; and the growth of personal experience and skill in the operator will show a gradual decrease of mortality, as notably illustrated in the practice of Dr. Keith, where it fell successively from 11 to 8·6 per cent. before he used antiseptics; and also in the experience of Mr. Wells and the author (from nineteen in the first to three in the second fifty). Mortality results indicate only the increase of skill, for a recovery after ovariotomy is the sum of a number of efficient details, but a death may be the failure of one detail only, not perhaps under the control of the surgeon. In the three deaths of the author's second fifty cases, two were due to details beyond his control, and had no relation to the antiseptic system; and the third, with full antiseptic details, was due to the irritative effects of thymol. In twenty-nine cases treated antiseptically there were two, and in twenty-one cases without antiseptic precautions only one death. Mr. Spencer Wells's statement relating to the marked improvement in his results since he had used antiseptics must be qualified by the fact that he had concurrently adopted the intra-peritoneal method of dealing with the pedicle—a method which had been very successful in the hands of Dr. Keith and of the author, and the statistics of which go to prove that little can be attributed to antiseptic precantions, though the author is not prepared to say that they were entirely without result. Reference was made to the fact (alluded to in a previous paper) that some of the details of the antiseptic method prevented the healing of wounds, which was the uniform experience of the author, as opposed to the success attending Mr. Wells's dressing of dry lint. The author then referred to an untried method for indicating the value of an individual detail, such as the antiseptic system, from an examination of the method of recovery of the patients, the basis of the antiseptic claim being that it prevents septic poisoning or fever and the deaths in ovariotomy usually occurring from the incidence of fever. The antiseptic system, therefore, must uniformly facilitate recoveries, as in non-antiseptic cases the germ will enter the peritoneum and theoretically produce fever in every case, and only therefore where the septic poison is counteracted will recovery be obtained. If therefore we find a marked difference between the curves of cases treated antiseptically and those not so, in favour of a less febrile course of recovery in the former, it will go towards establishing Mr. Lister's views; if there be no difference, the question is just where it was; but if a difference in favour of the other side, then he thought the germ theory would probably fade away from professional acceptance, as other fair visions had done before. The author then gave details of the system of temperature and pulse observations, which he always had taken by trained nurses, for ten days succeeding on ovariotomy, convalescence not being fully established till the eighth day, and not complete till the tenth. He attached more value to the pulse-curves than to those of temperature, as he found that a rise in them more gradually and more certainly indicated something wrong in the patient. The temperature also rises uniformly at night during recovery, whilst the pulse does not so after the fourth night—the critical night of an ovariotomy; and in a case ending badly, while the temperature does not rise to any remarkable height, the pulse rises continuously till it disappears. Comparisons were given of the curves in the figures as they related to cases treated by the clamp, or the intra-peritoneal method with or without antiseptic precautions, the non-antiseptic cases having a better pulse-curve than the antiseptic, and their time of recovery being one day shorter; and judging from both temperature and pulse curves, the non-antiseptic and short ligature method gives a better and shorter recovery than any other, the nocturnal acceleration of temperature in the antiseptic cases being caused by the suppuration of the wounds due to the irritating effects of the gauze dressings. The author stated that he had found more satisfactory results from dry lint dressings, and had given up antiseptic dressings (when used) after the seventh day, and used oxide of zinc ointment to facilitate the healing of the wounds. His experience had been confirmed by Prof. Hegar, who in oophorectomy had given up antiseptic precautions. In figures which he had constructed with regard purely to the Listerian method, regardless of methods dealing with the pedicle, it was shown that it had no paramount influence, the high temperature in the sixth and seventh evenings visible in both figures being clearly derived from the use of the clamp, and the curve of temperature being decidedly higher for the antiseptic cases; and in the pulse-curve the recovery of the non-antiseptic cases was more even and shorter. In conclusion, the author said that he did not attribute the delayed recovery to the use of Mr. Lister's processes, but he wished to show that the recovery of his patients was not facilitated by them. He had followed closely the published details of those who advocate the antiseptic system, and was at first strongly impressed by its influence, but after a large experience he began to suspect that he was attributing to it effects due to other causes, and his suspicions were confirmed by the facts given in the paper, which would cause him to modify his conduct in the dressings, etc., though he should continue to employ the antiseptic precautions during operation, unless a wider experience decided that they also might be given up.

The President said that, with regard to Mr. Tait's position, he seemed to admit the germ theory, but challenged its application to surgery.

Mr. Spencer Wells was consoled for Mr. Tait's theory by the fact that he still retained antiseptics in his practice, but for his own part he thought that Mr. Tait's facts would lead to quite opposite conclusions. Mr. Tait argued that by the use of antiseptics operations formerly shunned were now undertaken: but surely this was favourable progress. Certain it was that operations with the use of antiseptics did not put skill and ignorance on an equality. It was not necessary to neglect any other precaution to give antiseptics their full influence; rather their use favoured cure, especially as to details. In point of fact the system was all detail, and this too added to former precautions. Again, as regarded the intra-peritoneal method, his own success he attributed not so much to its employment as to Listerism. Really by this method his mortality had been nearly double as compared with the use of the clamp, other things being equal; and if this was true before Lister's method was introduced, it would remain so after. In point of fact, the intra-peritoneal method was only possible with the use of antiseptics. With regard to the dry dressing, he was inclined to support Mr. Tait's views, but he did not think that any antiseptic or anything of the kind was necessary after the seventh day. He had used antiseptics for two years, and since their employment he did not recollect seeing a single drop of pus. Again, the temperature was far less likely to be raised by emotion than was the pulse, and hence it was a better test of the patient's condition. With antiseptics the temperature was markedly lower after the operation than without, insomuch that the ice-caps formerly in use were now almost entirely discarded. Practically it came to this, that by the use of antiseptics recovery after ovariotomy was rendered more comfortable to both patient and surgeon.

Dr. Matthews Duncan said that, though not an ovariotomist, he would venture to say that he differed *toto cœlo* from Mr. Tait. Firstly, as regarded the theory, he thought that was better settled than most theories applied to medicine and surgery. It was useless to speak of not applying antiseptics in surgery. Nowadays everyone did in some form or other, as, for instance, in the cleansing of sponges and in the employment of the greatest care in cleanliness. Even Mr. Callender, whose success had been so great, only stopped short of Listerism in not employing the spray. As regarded Listerism and non-Listerism, ovariotomy afforded a very good test. Mr. Spencer Wells had got greater success with the spray than without; and at St. Bartholomew's, nowadays, the operation with the use of the spray had become quite successful. It was quite true that Dr. Keith had great success before using the spray, but he had greater after.

Mr. Knowsley Thornton said that, as regards the rise of temperature after ovariotomy, the use of antiseptics prevented it almost entirely, and the rise had been diminished by increased experience and care. Nowadays, when a rise of temperature and pulse was noted, a want of care was suspected, and this was borne out by the experience of others. Mr. Tait had made a great jump in his second fifty cases: what was this due to? Wounds did not heal well with wet dressings. He now only used the gauze dressing for a week, and he had never seen a drop of pus round a stitch. A second dressing was hardly ever required, especially after the ninth or tenth day.

Mr. Mac Cormac was surprised to find that temperature was spoken of as less reliable than the pulse. With regard to ovariotomy he had little experience, but certainly as regards other operations there was little rise with Listerism, and where there was any, this was often due to side causes. Ovariotomy wounds, as a rule, healed kindly; they were not like stumps, where drainage-tubes and the like were required. It was to be found that the testimony was universally in favour of the antiseptic system. In Germany alone, before its introduction, over 50 per cent. of all ovariotomies died. Haeger, whose authority had been cited, up to a recent time had used the most elaborate precautions which could well be imagined, though his system was not Lister's.

Mr. T. Smith thought Mr. Tait had proved perhaps a little too much. We ought, according to his views, to abandon Listerism altogether. As regarded pulse and temperature, a burst, say, of excitement would send up the former, but would not affect the latter.

Mr. Tait, in reply, maintained that his position was unshaken. He still used the spray, but that alone. He used no antiseptic gauze whatever. He only gave the results of his own experience; he could not speak of that of others. He held firmly that the pulse-curves were more important than those of temperature. The belief of some in Listerism was like that of some in the doctrine of election—none could understand or work it who were not fully possessed of it. Dr. Keith's success had increased *pro rata* before the introduction of Listerism exactly as it had done since.

CLINICAL SOCIETY OF LONDON.

Friday, February 13.

E. H. Greenhow, M.D., President, in the Chair.

(*Concluded from page* 222.)

Two Cases of Popliteal Aneurism cured by Esmarch's Bandage.

Mr. C. Heath read this paper. The first patient was a coal-miner, aged thirty-two, with a small popliteal aneurism. Flexion of the knee having been tried without effect, Esmarch's elastic bandage was applied below the knee, and an elastic bandage and cord above the knee, so that the sac was kept tense with blood and pulseless. This was borne for one hour without anæsthetics, and for two hours under the influence of bichloride of ethylene, and at the end of the three hours the sac had become solidified. The patient had been exhibited to the Society at a previous meeting, and had now gone home to Wales. The second patient was a potman, aged thirty-seven, with a small popliteal aneurism, presumably tubular. Esmarch's bandage was applied above and below the knee; but it was noted that, though pulsation was arrested, the sac was not rendered so tense as in the former case. On removal, after three hours, pulsation returned as strongly as before. Digital compression of the femoral was then maintained for three hours with marked effect, but without curing the aneurism. A second application of Esmarch's bandage rendering the sac tense, and producing local ecchymosis, was successful in stopping the pulsation permanently. Mr. Heath laid stress upon the importance of putting no pressure upon the aneurism itself, and of keeping it tense with blood in order to induce coagulation of the contents of the sac.

Mr. Sidney Jones remarked that the case was of importance as showing how long such a bandage could be used and the circulation completely stopped without impairment to the part. The bandage had done well in two cases of popliteal aneurism under his care, but in one of axillary aneurism the improvement had been temporary only. He had kept the bandage applied for an hour only. In one case he afterwards applied digital pressure, and in the other the bandage had to be re-applied. He could not agree with Mr. Heath's theory that distension of the aneurism favoured clotting. In Hunter's operation, where the artery was tied far above the aneurism the tumour seemed to shrink, and he thought this contraction was of some value in the cure.

Mr. Hulke said that as over-tension might produce rupture of a thin-walled aneurism, any plan tending to favour it would be more or less risky.

Mr. Marsh inquired why the bandage was removed from the part of the limb above the aneurism first of all.

Mr. Croft said he had reported one case where the aneurism was cured by what he called the interrupted bandage in about six hours. The bandage was only kept on for one hour, but the aneurism was not solid then. In another case he had used the bandage for one hour; the patient was syphilitic, and the aneurism was the size of an orange. The pulsation was diminished, but not stopped, and digital compression was employed. Two hours and a half sufficed for the consolidation. Here there was a considerable difference in point of the time employed, and he was unwilling to prolong the application of the bandage or the use of anæsthetics, as these were likely to retard the process of coagulation. He thought the bandage need only be applied long enough to partially solidify the contents of the sac.

Mr. T. Smith considered the great point established was that the circulation could be stopped for three hours without harm. He always limited the application of the bandage to an hour and a half. He then tried an Italian tourniquet or a re-application of the bandage. He thought it was a good plan to use the cord over the flat bandage, as in some cases paralysis for a time seemed to follow the use of the cord alone. The clot thus formed was not, however, always permanent. In one case it disappeared three times; and the same occurred in another case. The time of application, he thought, must vary in different cases. He, in one well-known case, had used no anæsthetics; the time employed occupied three hours. In another case, where compression could not be well borne, he had allowed the patient to smoke a pipe, with which there was no difficulty in continuing the pressure.

Mr. Hulke remarked that as regards vitality in the case of skin-grafting the grafts might be taken from bodies as long as twelve hours after death with perfect success.

Dr. Mahomed suggested that after the application of the bandage the sac might be punctured with an electric needle.

Mr. Morrant Baker mentioned a case under his care where no anæsthetic had been used. The bandage was applied one hour, and digital compression one hour, then again the bandage was used for half an hour, after which compression completed the solidification. He would like to know something more of the use of bichloride of methylene. Ether was, perhaps, too great a stimulant to the heart.

Mr. Heath, in reply, said that the anæsthetic employed in his cases was bichloride of ethylene, not of methylene, which he believed to be a rather dangerous substance. He did not think its use obstructed coagulation. Pain was commonly present in excess just at the period of coagulation; hence he preferred to use anæsthetics. The aneurisms in his cases being small and thick-walled, there was little risk of rupture; and he believed that distension decidedly favoured coagulation. Broca, it was true, had condemned the formation of a passive clot, but experience had shown he was wrong. The time was a purely empirical matter. The tourniquet was removed first as a matter of convenience. He would be loth to use galvano-puncture; if he were to use anything he would introduce ordinary needles.

PATHOLOGICAL SOCIETY.

Tuesday, February 17.

Jonathan Hutchinson, F.R.C.S., President, in the Chair.

The President called the attention of the members to a peculiar skin eruption seen in a female patient whom he exhibited. He was unable at present to say what the name or nature of the affection was, but hoped to bring before the Society at a future meeting a report on the case.

Congenital Occlusion of the Duodenum.

Dr. Goodhart exhibited this specimen, sent to him by Mr. George Eastes, taken from an infant who was well nourished when born, but within an hour of birth began to vomit. The vomited matters at first consisted chiefly of mucus; but before death, which took place 126 hours after birth, and was preceded by epileptiform fits, they became of a "coffee-ground" character. There had been noticeable wasting before the infant died. There was found, post-mortem, complete congenital occlusion at the lower part of the duodenum. A valvular-looking fold near the occluded part proved to be the dilated end of the common duct, but a bristle could not be passed along the duct. A small amount of meconium-like fluid had been passed per anum during life. No such case of congenital duodenal occlusion had been recorded in the Society's *Transactions*, and only seven or eight altogether were on record.

Gangrene of the Colon, with Cancer of the Sigmoid Flexure.

Dr. Goodhart also exhibited this specimen, which he said was of interest, especially as taken along with a specimen described by Mr. Baker in vol. xxx. of the Society's *Transactions*, and with another exhibited last year by Mr. Doran. The specimen was from the body of a married woman, aged fifty-four, who on getting up one morning was seized with great abdominal pain. Peritonitis supervened, and she died ten days after the pain began. Although there had previously been, now and then, attacks of abdominal pain, the woman was fairly well before the sudden onset of the fatal illness, but at that date the bowels had not acted for two days. Post-mortem, there was found, besides the general peritonitis, cancerous stricture of the sigmoid flexure, and the transverse and descending portions of the colon were of a deep colour. A few superficial gangrenous patches were found at the beginning of the transverse colon, and more gangrene was found farther along the bowel, but the gangrene ended abruptly a little above the cancerous stricture of the sigmoid flexure. There was no great distension of the gut, and no history of noticeable distension. The speaker asked whether the gangrene might not have been due to a colitis set up by irritant matters retained in the colon owing to the existence of the stricture? No plugged vessels were found, and the gut did not seem to have been at all twisted.

Dislocation of the External Semilunar Cartilage of the Knee-joint.

Mr. Godlee exhibited a knee-joint, the external semilunar cartilage of which had been detached from the capsule, and was placed vertically between the condyles of the femur. No history could be given of the case, as the lesion was found in a museum specimen. But the displacement had undoubtedly been produced during life, for the ends of the tibia and femur showed some erosion due to their coming more directly in contact than would have been possible with the cartilage in its proper place. The patient, however, had probably been able to walk about without difficulty, for all the cases in which this lesion has been diagnosed seem to have got well. It was probably more frequent than was supposed, as it gave rise to little difficulty in walking, and to little noticeable deformity, a slight fulness on the side—usually the inner side—of the ligamentum patellæ being, however, observed in most instances. The best account of dislocations of the semilunar cartilages the speaker had found was in Cooper's "Surgical Dictionary." Mr. Godlee showed, from anatomical considerations, why the external cartilage might be expected to be more frequently dislocated than its fellow.

Ulcers of the Stomach and of the Duodenum.

Dr. N. Moore exhibited a series of specimens illustrative of these lesions. The first specimen showed a simple ulcer of the stomach, one inch and a half by two-thirds of an inch, situated on the posterior surface and lesser curvature. The edges were thickened and overhanging. The floor was partly formed by the pancreas. In the recent condition two slightly raised blood-stained points were here visible, and were found on section to be clots in erosions of the pancreatic artery. Except at these points, the surface of the ulcer was smooth, and seemed quite healed. So great contraction had resulted that the stomach was constricted at the level of the ulcer so much that only the little finger could be passed through the opening between the two divisions of the viscus. Death had resulted from hæmorrhage. The patient, a woman aged fifty-four, had had, a year before death, some pain in the abdomen after eating, but had recovered. Four months before death she again began to feel abdominal pain, gradually increasing in severity, and she frequently vomited her food. Three weeks before death she vomited half a pint of blood. She died after fainting, due to a second hæmorrhage, as the necropsy showed. The second specimen was also one of simple ulcer of the stomach, situated on the anterior wall and lesser curvature, and about an inch and a half from the pylorus. In this specimen there was another smaller ulcer, shallow and apparently quite healed, situated on the lesser curvature and nearer the pylorus than the larger ulcer. The latter had recent perforations, and death had been due to the consequent acute peritonitis. The patient, a man aged fifty-seven, had suffered from vomiting for fifteen months, and died after a sudden attack of severe abdominal pain. A third case of simple ulcer of the stomach was noteworthy as having caused death in a manner not sufficiently recognised by writers on the subject. The ulcer in this case, that of a man aged twenty-five, was on the posterior wall, close to the cardiac orifice, but it was found quite healed. It had, however, given rise to adhesions, and had been the evident cause of the chronic peritonitis, which ultimately caused death by exhaustion. There was an obscure history of gastric pain for some years. The next specimen was one showing a simple ulcer of the duodenum, oval in shape, and of small size. It was situated on the anterior wall of the duodenum, one inch below the pylorus. Death had resulted from perforation and acute peritonitis. The patient, a man aged twenty, for several weeks had felt pain two hours after taking food. A very violent attack of pain followed a meal of pickled salmon, and death ensued in fourteen hours. The last specimen exhibited was one in which a gall-stone had ulcerated through into the duodenum. Several gall-stones were seen embedded in a thickened gall-bladder, and above one of them was an ulcerated passage by which a small calculus had ulcerated through into the duodenum. The patient, a nurse, had had dyspeptic symptoms for some time; there had been no jaundice. Vomiting came on suddenly, and could not be controlled, and she died in twenty-four hours. Dr. Moore stated that since 1867 there have been at St. Bartholomew's Hospital twelve fatal cases of ulcer of the stomach, ten of these being in men, and two in women. In five of these cases death was due to perforation, in two to exhaustion, in two to hæmorrhage, in one to the production of a fistulous opening into the liver and lung; the remaining two died of phthisis. There had been only one case of ulcer of the duodenum in these same twelve years.

Dr. Coupland asked whether it was really common to find ulceration of the duodenum as the result of superficial burns. In a considerable experience of necropsies in such cases, he had not once found the two conditions associated.

Dr. Pearson Irvine remarked that the constriction of the stomach resulting from the contraction dependent upon a healing ulcer was by no means rare. It had been well seen in a necropsy he had recently conducted. It was in such cases, where the cicatrising ulcer was bound down to neighbouring structures, that chronic peritonitis was most likely to be produced. The same specimen also illustrated what was a very great danger of these ulcers, even when healed or all but healed. This ulcer was itself cicatrised, but in the floor of it there was found, on careful examination, an aneurismal dilatation of a small bloodvessel, and this minute aneurism had been the source of the fatal hæmorrhage in the case.

Dr. Gilbart Smith said he had recently seen a specimen quite similar to the one referred to by Dr. Irvine. There was a very small ulcer, which had healed, or all but healed, but in its floor there was found a minute aneurism that had given rise to fatal hæmorrhage. He afterwards remarked, in reference to Dr. Coupland's question, that it was in cases of extensive superficial burning, followed by prolonged suppuration, that ulceration of the duodenum was believed to take place.

The President said that the association of duodenal ulcer with burns had first been pointed out by Mr. Curling from cases occurring at the London Hospital. The speaker believed several such cases had been found.

Mr. Godlee, Dr. Payne, and Dr. Moore had each seen one case where duodenal ulceration was associated with a superficial burn; and Dr. Goodhart had in two cases of burns found erosion, not of the duodenum, but of the stomach side of the pylorus.

Mr. H. Cripps remarked that sometimes hæmorrhage per anum might be due to ulcer of the stomach. He referred to a case where such hæmorrhage had taken place to a fatal extent, and where, post-mortem, the cause of it was found to be a small circular ulcer towards the cardiac end of the stomach. There had been no hæmatemesis or vomiting of any kind.

(To be continued.)

MEDICAL NEWS.

Royal College of Surgeons.—The following gentlemen, having undergone the necessary examinations, were admitted Licentiates in Dental Surgery at a meeting of the Board of Examiners on the 23rd inst., viz.:—

Cooksey, George, Southampton, student of the Middlesex Hospital.
Cooksey, Edward Thomas, Southampton, of the Middlesex Hospital.
Davis, Marcus, Maida-hill West, of the Middlesex Hospital.
Gould, Frederick W., Kingston-on-Thames, of the Middlesex Hospital.
Howarth, Ambrose, Bradford, of the Middlesex Hospital.

The following were the questions on Anatomy and Physiology, and Surgery and Pathology, and on Dental Anatomy and Physiology, and Dental Surgery and Pathology, submitted to the candidates on the 19th inst. for the Licence in Dental Surgery, viz.:—Anatomy and Physiology: 1. By what forms of suture are the bones of the cranium united? Name these sutures and describe each form. 2. Describe the circulation of the blood, and state by what forces it is circulated. Surgery and Pathology: 1. Mention the different forms of ulcer which are met with in the mouth; and describe briefly the characters and treatment of each. 2. What are the symptoms of periostitis? State how it may be produced, and what treatment you would adopt in its different stages. Dental Anatomy and Physiology: 1. Describe the specimens under the microscope Nos. I., II., and III. 2. What relation have the teeth to the function of speech? Describe the effects on articulate sounds occasioned by the loss of the several teeth respectively. 3. What are the anatomical and histological peculiarities of the teeth in marsupial animals? Dental Surgery and Pathology: 1. In what manner would the dental surgeon employ the following substances?—arsenious acid, carbolic acid, chlorate of potass, chloride of zinc, permanganate of potass, nitrate of silver, and nitric acid. 2. Enumerate and describe the various forms of cystic disease connected with the teeth. 3. Enumerate and briefly describe the several affections of the nervous system that may arise from diseases of the teeth.—The following was the Practical Examination on the 20th inst.:—Each candidate was required, in addition to any other practical work, to make a gold filling. He must have prepared the cavity on a previous occasion, so that nothing had to be done but to insert the gold. The fillings were such as it took from half to three-quarters of an hour to do. Each candidate had to bring all his own plugging instruments and materials.

Apothecaries' Hall, London.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, February 19:—

Beevor, Charles Edward, 129, Harley-street, W.
Biden, Edward James, The Terrace, Kilburn.
Sequeira, Henry James, Jewry-street, Aldgate, E.C.
Stephen, John Alexander Lewis, 71, Church-road, W.

The following gentleman also on the same day passed his Primary Professional Examination:—

Holton, Francis William Parke, St. George's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to all new Appointments that take place.

Ballance, C. A., L.R.C.P., M.R.C.S., L.S.A.—Resident Accoucheur to St. Thomas's Hospital.

Ferrier, D., M.D., F.R.C.P., F.R.S.—Physician to the National Hospital for the Paralysed and Epileptic (Out-Patient Department), Queen-square, Bloomsbury.

Fowler, J. K., B.A., M.B., L.R.C.P.—Assistant-Physician to the Middlesex Hospital.

Gowers, W. R., M.D., F.R.C.P.—Physician to the National Hospital for the Paralysed and Epileptic (Out-Patient Department), Queen-square, Bloomsbury.

Hatton, G. S., M.R.C.S., L.S.A.—Assistant House-Physician to St. Thomas's Hospital.

Horrocks, P., M.D.—Assistant-Physician to the National Hospital for the Paralysed and Epileptic, Queen-square, Bloomsbury.

Lunn, J. R., L.R.C.P., M.R.C.S., L.S.A.—Assistant House-Surgeon to St. Thomas's Hospital.

Newsholme, A., M.R.C.S., L.S.A.—House-Physician to St. Thomas's Hospital.

Ormerod, J. A., M.A., M.B., M.R.C.P.—Assistant-Physician to the National Hospital for the Paralysed and Epileptic, Queen-square, Bloomsbury.

Shaw, J., M.R.C.S., L.S.A.—House-Physician to St. Thomas's Hospital.

Sheppard, C. E., M.B., M.R.C.S., L.R.C.P., L.S.A.—House-Surgeon to St. Thomas's Hospital.

Smith, R. P., M.B., M.R.C.S., L.R.C.P., L.S.A.—House-Surgeon to St. Thomas's Hospital.

Williamson, R. J., M.A., M.B., M.R.C.S., L.R.C.P.—Assistant House Physician to St. Thomas's Hospital.

BIRTHS.

Fenn.—On February 2, at Richmond, Surrey, the wife of Edward L. Fenn, M.D., of a son.

Gribbon.—On January 23, at Dalhousie, Punjaub, India, the wife of Surgeon-Major G. C. Gribbon, A.M.D., of a son.

Larkin.—On February 18, at Trinity-square, S.E., the wife of F. G. Larkin, M.R.C.S., of a daughter.

Lidderdale.—On January 27, at Darjeeling, Rosamond, the wife of Robert Lidderdale, M.D., Bengal Army, of a son.

Woodman.—On February 20, at 5, Prospect-terrace, Ramsgate, the wife of Samuel Woodman, F.R.C.S., of a daughter.

MARRIAGES.

Bateman—Kennedy.—On December 17, at Tenterfield, New South Wales, Arthur Wigley Bateman, M.B. Oxon, L.R.C.P., L.R.C.S. Edin., to Anna Louisa Kennedy, the eldest daughter of George Kennedy, Esq., of Tenterfield.

Garrett—Soulby.—On February 10, at Hull, Edward Henry Garrett, Esq., Secretary to the Hull Dock Company, to Henrietta Louisa Ann, daughter of Henry Soulby, M.D.

Morgan—Blyth.—On February 12, at Kilburn, George John Morgan, M.R.C.S.E., of Dovaston House, Kinnerley, Salop, to Charlotte Annie Jane, daughter of Robert Blyth, L.S.A., of Shrewsbury.

Taunton—Noad.—On February 19, at Wokingham, Berks, William Whitchurch Taunton, Esq., to Margaret Elizabeth, second daughter of George William Noad, M.D., of Wokingham.

Treadwell—Gilpin.—On February 19, at Newcastle-on-Tyne, Samuel Treadwell, M.R.C.S., of Worcester, Cape of Good Hope, to Harriett, widow of Henry Gilpin, Esq., of Newcastle.

DEATHS.

Craig, James, F.R.C.S., at 1, Lennox-street, Edinburgh, on February 21.

Davies, Edward Pellew, M.R.C.S., late of Christchurch, Hants, at 6, Guildford-terrace, Dover, on February 17, aged 66.

De Mierre, Albert, M.D., at Ben Venue, Torquay, on February 19, aged 75.

Ewart, Jessie Caroline Schafer, wife of J. Cossar Ewart, M.D., at 21, Rubislaw-terrace, Aberdeen, on February 17, aged 30.

Fleming, William, M.D., a magistrate for the counties of Westmoreland and Lancaster, at Rowton Grange, near Chester, on February 19, in his 81st year.

Halse, Emma Sophia, wife of Charles S. Halse, M.D., at 4, New Bridge-street, E.C., on February 21.

Jones, Llewellyn, M.D., at Beaumaris, Anglesey, on February 14, aged 78.

Mansfield, Pierce Blackader, B.A., M.D., M.Ch., L.M., L.R.C.S., Fleet-Surgeon R.N., at Penge, on February 10, aged 43.

Maxwell, Edward Cleaver, M.R.C.S., late Assistant-Surgeon 13th P.A.L.I., at Ebberly Lawn, Barnstaple, Devon, on February 18, aged 39.

Sopwith, Henry Lindsell, F.R.C.S., at 1, Calverly-parade, Tunbridge-wells, on February 12, in his 72nd year.

Tribe, B., F.R.C.S., late of Chatham, at Strood Hill, next Rochester, on February 16, aged 95.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

Glamorganshire and Monmouthshire Infirmary and Dispensary, Cardiff.—House-Surgeon. Candidates must be registered in medicine and surgery. Applications, with testimonials, to be sent to the Chairman of the Committee, on or before March 8. Any further information may be obtained of the Secretary, Herbert R. Vachell, M.B.

Great Yarmouth Hospital.—House-Surgeon. Candidates must be unmarried and duly registered to practise medicine and surgery. Applications, with testimonials, to be sent to R. R. B. Norman, Esq., Hon. Secretary, on or before March 18.

Hospital for Epilepsy and Paralysis, Regent's-park, N.W.—Physician. Candidates must be graduates of medicine, and Members or Fellows of the Royal College of Physicians. Applications, with copies of testimonials, to be sent to the Chairman of the Committee on or before March 1.

Leith Hospital.—Assistant-Surgeon. Applications, with testimonials, to be sent to the Secretary, Mr. G. V. Mann, 33, Bernard-street, Leith, from whom further particulars can be obtained, on or before March 10.

Liverpool Northern Hospital.—Assistant House-Surgeon. Candidates must possess medical and surgical qualifications from one or more British colleges or institutions recognised under the Medical Act. Applications, with testimonials, to be sent to the Chairman of the Committee not later than February 28.

METROPOLITAN ASYLUM DISTRICT: LEAVESDEN ASYLUM FOR IMBECILES, NEAR WATFORD, HERTS.—Two Assistant Medical Officers. Candidates must be duly registered and qualified to practise both medicine and surgery in England. Preference will be given to those who have had experience at similar institutions. Applications to be made on a form obtainable at the Manager's offices, 37, Norfolk-street, Strand, W.C., and, accompanied by copies of not less than three testimonials, are to be sent in on or before February 28.

WEST SUSSEX, EAST HANTS, AND CHICHESTER INFIRMARY AND DISPENSARY.—Honorary Physician and Honorary Surgeon. Candidates must possess medical and surgical qualifications, and be duly registered. Applications to be sent to the Secretary, William Thos. Atkey, Esq., before March 1.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Cricklade and Wootton Basset Union.—Mr. T. R. B. Parker has resigned the First District: area 10,760; population 3224; salary £40 per annum.

Huddersfield Union.—Mr. G. W. Rhodes has resigned the Crosland Moor Workhouse: salary £50 per annum.

APPOINTMENTS.

Battle Union.—F. M. Wallis, M.R.C.S. Eng., L.S.A., to the Third District.

Huntingdon Union.—Herbert Lucas, M.R.C.S. Eng., L.S.A., to the Workhouse.

Liverpool Parish.—Duncan Forbes, M.B. Edin., L.R.C.S. Edin., to the Brownlow Hill Workhouse.

Stockbridge Union.—Walter K. Loveless, L.R.C.S. Edin., L.R.C.P. Edin., to the Stockbridge District, and the Workhouse.

MR. CLEMENT LUCAS last week excised the left kidney of a man aged thirty-six for suppuration of six years' standing. The patient is progressing favourably.

A VERY large meeting gathered together in St. James's Hall, Leeds, last week, to witness a presentation to Dr. Edwin Foster, who for nearly fifty years has been professionally connected with the various friendly societies of that town. The presentation took the form of a handsomely designed address, accompanied by a solid silver épergne and a valuable black marble clock with vases to match, the whole purchased by subscriptions from forty-eight different societies, and many of Dr. Foster's private patients. The Rev. Canon Jackson presided upon the occasion.

AFFECTIONS OF THE EAR ARISING FROM DISEASES OF THE TEETH.—Dr. Sexton, Surgeon to the New York Ear Dispensary, has contributed to the *American Journal of Medical Science* for January an elaborate paper on this subject. He states that, having some time ago met with a case of acute *otitis media purulenta*, the favourable progress of which was arrested by a carious tooth, he resolved in future to take accurate notice of cases in which dental and aural disease co-existed. Examining the records he has since then kept, he finds out that of about 1500 aural cases perhaps one-third owe their origin or continuance, in a greater or less degree, to diseases of the teeth.

DEATH OF PROFESSOR BUCHHEIM.—We regret being so late in announcing the death, which took place at the end of December, of Rudolph Buchheim, Professor of Materia Medica at Giessen. Prior to his nomination to his chair on the retirement of Prof. Phœbus, Prof. Buchheim had for many years filled that of Pharmacology at Dorpat with eminent success and a high scientific reputation. Among his principal works were "Jonathan Pereira's Materia Medica, edited in relation to German Medicine," and his *Lehrbuch d. Arzneimittellehre*, first published in 1853. This work, with full right, enjoyed a great reputation and wide circulation, the third edition appearing in 1878. Buchheim belonged to the good old school of pharmacologists, while he fully sympathised with modern progress, to which he also greatly contributed.—*Berl. Klin. Woch.*, February 2.

STATISTICS OF PELLAGRA IN ITALY.—According to an official inquiry that has been made, there exist not less than 97,000 persons affected with pellagra in Italy, for the most part inhabiting Milan, Venice, and the Æmilia. The disease has become developed, especially during the last fifty or sixty years, consentaneously with the great development of the cultivation of maize. Almost without exception, the subjects of the disease belong to the rural population, and subsist almost entirely on maize. Insufficient alimentation, excessive labour, defective hygiene, and bad drinking-water are met with in other regions of Italy, but they do not give rise to pellagra when maize is not made the exclusive article of diet. The maize so employed is frequently also in a diseased condition.—*Gaz. Med. Lombardia*, February 7.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following is the syllabus of Professor Flower's course of nine lectures on the Comparative Anatomy of Man, to be delivered in the Theatre of the College, commencing on Monday, March 1, viz.:—Additions to the Museum since the last course; the Barnard Davis collection; Baron von Hügel's collection of crania from the Fiji Islands, presented by Mr. Erasmus Wilson; anatomical characters of the Fijians as derived from this series; the races of America; prevalence of artificial cranial deformity; antiquity of man in America; unity or diversity of race; native races of North, Central, and South America; the races of Africa; physical characters of the typical negro; modifications of the negro type; Bantu or Kaffirs; Hottentots; bushmen; inhabitants of North Africa; Berbers; Guanches; Arabs; Egyptians, ancient and modern. The course will conclude on Friday, March 19.

ARBITRATIONS UNDER THE ARTISANS' DWELLINGS ACTS.—The arbitrator appointed by the Home Secretary under the Artisans' and Labourers' Dwellings Acts of 1875 and 1879, to determine the amounts to be paid for property taken under certain improvement schemes, concluded his sittings last week. The property which has come under the notice of this gentleman consists of three areas, described as the Mint-street, the Elizabeth-street, and the King-street areas, situate in the parish of St. George-the-Martyr, in the borough of Southwark, and comprises all that portion the purchase of which had not previously been arranged between the owners and the representative of the Metropolitan Board of Works. A large portion of this is stated to be what the Act terms "unhealthy areas." The arbitrator has been engaged for five days in hearing objections to his provisional awards, as required by Act of Parliament; these he will take into consideration before making his second award, which is final and binding unless any of the parties elect to refer the matter to the consideration of a jury.

LOCAL USE OF CHLOROFORM IN DENTISTRY.—Dr. Schaffer, speaking from an extensive experience in teeth-extraction, states that the local use of chloroform forms a most admirable preventive of all subsequent hæmorrhage or other ill-consequences, and hastens the contraction of the wound in the gums. He strongly recommends it as a "mouth-wash," acting as it does in all affections of the gums and teeth as a disinfectant, anodyne, and corroborant. The formula he uses is—Spirits of wine 100, and chloroform 5 to 10 parts, peppermint oil 5 to 10 drops.—*Wien. Med. Woch.*, January 24.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

*** We last week alluded to the difficulties which the large milk-sellers had to contend with in insuring that the supplies issued by them were not tampered with by their servants in course of delivery. We have since been informed by the Managing Director of the Aylesbury Dairy Company that before leaving their premises every can is sealed with a leaden seal impossible to be tampered with. We have also perused the printed instructions issued to their servants, and are bound to confess that every precaution seems to be taken by this Company to prevent sophistication in transit.

W. D. S.—The Medical Appointments Qualifications Bill has been introduced by Messrs. Errington and Blennerhassett, and is "to amend the law relating to the qualifications required for holding certain medical appointments."

H. M., Manchester.—We understand there will be three vacancies declared in the Council of the College of Surgeons, caused by the resignations of Messrs. Busk and Curling, who, it is stated, will not offer themselves for re-election, and by the death of Mr. H. Hancock. These gentlemen have all filled the President's chair.

Dr. Williams.—Mr. Holden, President of the College, will deliver the Hunterian Oration next year. It was the late Sir William Lawrence who said—"Hunter was the greatest man in the combined character of physiologist and surgeon that the whole annals of medicine can furnish." He died on October 16, 1793.

B. Carr L.—Legislative interference (independently of enactments in the Public Health and Nuisances Removal Acts) with works emitting noxious vapours began in 1862, when a Select Committee of the House of Lords was appointed to inquire into "the injury resulting from noxious vapours evolved in certain manufacturing processes, and into the state of the law relating thereto." After taking evidence on the subject the Committee made their report during the same session of Parliament.

L. H.—John Hunter left a widow, of whom the celebrated Madame D'Arblay says—"I once met her at an assembly at Mrs. Thrale's; she is a very fine woman and highly accomplished, but with rather too much glare both without and within." She was a sister of Sir Everard Home, Bart.

Ways and Means.—The Metropolitan Board of Works, at the recommendation of the Works Committee, have agreed to take powers in their Money Bill for 1881 to lend £50,000 to the Metropolitan Asylums Board.

J. R. P., Charlton.—When a case of small-pox occurs in a barrack-room or in a family, we believe that all the other persons occupying the quarters or room are at once re-vaccinated.

Paterfamilias.—The effect of the climate of St. Helena is considered to deteriorate the health of Europeans by causing general relaxation and want of tone. Tropical or acute diseases of any kind are singularly absent, and the position of the island and the maintenance of a strict quarantine are effectual in preventing the admission of contagious diseases from ships touching there for water or supplies. Malaria is absent, and on the whole the island is stated to enjoy a high ratio of health considering its tropical situation.

A Retired Surgeon.—The number of naval surgeons who tendered their resignation during the five years preceding 1875 was twenty-five. Six tenders of resignation were refused temporarily, but ultimately accepted.

New Hospital for Sick Children, Brighton.—The foundation-stone of a new permanent hospital for sick children was laid last week on the Churchill Estate, Brighton—the site of the present temporary institution. It will accommodate seventy-five patients, and be fitted with all the latest sanitary improvements. The cost is estimated at £10,000.

Meat-Supplies from Australia.—The meat-supply in Australia, and particularly in New South Wales, is so far in excess of the demand, and the stock-owners of the colony so strongly feel the necessity of finding a fresh outlet for their stock, that it is very probable a permanent trade will shortly be established with England by regular exportations from the colonies of meat preserved by the freezing process. As to preparing and exporting meat to England, a meeting was held in Sydney, on December 26, at which a large number of persons interested in stock-breeding and pastoral pursuits attended.

Russo-Turkish War: Blindness in the Russian Army.—A well-known specialist in ocular diseases—Staff-Surgeon Skrebitzky—in a recently published report on the Russian military hospitals, twenty-six of which he has inspected in different governments in the Empire in the past few months for the purpose of discovering the causes of the extraordinary number of cases of total blindness among the Russian soldiers, after the invasion of Turkey, found (exclusive of the cases of eye disease reported in the registers of these hospitals as having ended fatally since the war) that the number of living men who lost their sight through active service in the campaign in 1877 was considerably above 2000. Only 4 per cent. of all the cases in question were from wounds or injuries received in action. Ninety-six out of every hundred had been caused by the want of sanitary precautions, by filth, insufficient clothing, and unwholesome food.

Anti-Vaccinators: a Repudiation.—The Honorary Secretary of the Brighton Branch of the Anti-Vaccination League has addressed a letter to the Brighton Board of Guardians, repudiating as "unjustifiable under any circumstances" the threatening letters recently sent to the Chairman or the Board and to Alderman Cox, J.P., for supporting the carrying into effect of the Vaccination Act. The Board discussed the propriety of taking any notice of the latter. Ultimately, however, a resolution was adopted protesting against the un-English and cowardly manner in which their officers, in the execution of their duty, had been threatened; and as to the letter in question, the Clerk was directed to formally acknowledge its receipt.

Hydrate of Chloral.—Dr. H. H. Kane, of New York City, U.S.A., specially requests members of the profession with any experience whatever in the use of the hydrate of chloral to answer the following questions, and give any information they may possess with reference to the literature of the subject:—1. What is your usual commencing dose? 2. What is the largest amount you have administered at one dose, and the largest amount in twenty-four hours? 3. In what diseases have you used it (by the mouth, rectum, or hypodermatically), and with what results? 4. Have you known it to affect the sight? 5. Have you ever seen cutaneous eruptions produced by it? 6. Do you know of any instances where death resulted from or was attributed to its use? If so, please give full particulars as to disease for which given; condition of pulse, pupils, respiration, and *temperature*; manner of death; condition of heart, lungs, and kidneys; general condition, age, temperament, employment, etc. If an autopsy was held, please state the condition there found. 7. Have you seen any peculiar manifestations from chloral—as tetanus, convulsions, or delirium? 8. Do you know of any cases of the chloral-habit? If so, please state the amount used, the disease for which the drug was originally administered, the person's age, temperament, and the present condition of the patient. Physicians are earnestly requested to answer the above questions, in order that the resulting statistics may be as full and valuable as possible. All communications will be considered strictly confidential, the writer's name not being used when a request to that effect is made. Address all letters to Dr. H. H. Kane, 366, Bleecker-street, New York City.

Coffee-Tavern Items.—The success of the coffee-tavern movement in England has encouraged a trial in other countries. A company has been organised at Amsterdam, with a capital of £15,000, and the first establishment has just been opened at a cost of £3500.——The establishment of coffee-taverns in connexion with the canteens at Woolwich has in a short time proved remarkably successful, through a system introduced of delivering hot coffee to the troops while at their stable and fatigue duties early in the morning, which has been especially appreciated. The coffee-bar is under the same roof as the canteen proper, at which beer, &c., is sold, and its application to military canteens has proved most beneficial and remunerative.——A temperance hotel is about to be erected in the Queen's-road, Hastings, at a probable cost of about £5300.——A new coffee-tavern built at Leeds, at the entire cost of the Rev. F. Hammond, of Pontefract, a native of Leeds, has just been opened.——The establishment of coffee music-halls, for providing music without intoxicants, is being energetically set on foot by Lady Thompson and others.——A new coffee-palace, under the management of the Coffee-Palace Company, has just been opened by the Lord Chancellor at 234, High Holborn. It is the ninth belonging to this Company in the metropolis. There are now nearly fifty coffee-taverns of all kinds in London.——Last week Lord Wrottesley opened the eleventh coffee-tavern in the district of Wolverhampton, belonging to the Staffordshire Cocoa and Coffee-House Company.

A Dissatisfied Ratepayer.—By the Metropolis Local Management Acts the powers as to paving, watering, and lighting streets were placed under the control and management of the vestries and district boards, and not of the Metropolitan Board of Works; and in every Act extending the powers of the Metropolitan Board as to making new streets, the obligation has been put on the latter Board to give up the streets, when completed, to the vestries and district boards, to be managed by them.

Effects of the General Depression.—It was stated at the fifty-second annual meeting, just held, of the governors of the Sussex County Hospital, that, in consequence of the falling off of nearly £3000 in the receipts, a financial crisis had arisen which necessitated the limitation of the admission of patients to those whose cases were most urgent. The expenditure for the year was £10,000, but there had been a progressive decrease for the past five years in the ordinary income of the Hospital.

Women Factory Inspectors.—Mr. Redgrave, the Chief Inspector of Factories and Workshops, in his recently printed report, referring to a proposal which has been made that some of the inspectors of factories should be women, "doubts very much" whether the office is one suitable for a woman, and gives various reasons for his opinion. He thinks it would be impossible for them to perform the duties of inspectors in a comfortable and satisfactory manner, so long as the duties of inspectors of factories are conducted upon the present lines. He fails to see how the administration of the law would be made more effective by the services of women, and thinks the supporters of the proposal have not realised what the duties actually are.

COMMUNICATIONS have been received from—

Mr. J. Hamilton Craigie, London; Dr. George Whyte, Elgin; Dr. Farr, London; Dr. Fowler, London; Dr. Octavius Sturges, London; The Registrar of Apothecaries' Hall, London; Dr. Hermann J. Jones, London; Dr. Edward Playter, Toronto, Canada; The Agent-General for New South Wales; The Secretary of the Society of Arts, etc.; The Honorary Secretary of the Harveian Society of London; The Director-General of the Army Medical Department; The Secretary of the Royal London Ophthalmic Hospital, London; Dr. G. E. Herman, London; The Managing-Director of the Aylesbury Dairy Company; Dr. Robert Saundby, Birmingham; The Registrar-General for Ireland; Mr. John Bellamy, Local Government Board; Dr. Matthews Duncan, London; Dr. J. F. Goodhart, London; Dr. James Irving, Tunbridge; Mr. G. A. Cardew, Cheltenham; Mr. D. Colquhoun, London; The Honorary Secretary of the Medical Society of London; Mr. J. Chatto, London; Dr. W. R. Gowers, London; Mr. T. M. Stone, London; The Military Secretary, India Office; Mr. Sampson Gamgee, Birmingham; Mr. Benjamin Walker, Spondon, Derby; Mr. R. Clement Lucas, London; Dr. Edward I. Sparks, Mentone; Dr. H. H. Kane, New York; Dr. C. A. Rayne, Devonport; Mr. J. Hope Finlay, Edinburgh; Surgeon-Major Cotter, Ballincollig, Cork; Dr. Sedgwick, London; The Registrar-General, Edinburgh; Dr. J. W. Moore, Dublin; Mr. C. J. Cullingworth, Manchester; The Honorary Secretaries of the Epidemiological Society, London; Dr. Ward Cousins, Southsea; Dr. O. Fehrsen, Cradock, Cape of Good Hope; The Secretary of the Epsom College; Dr. Godson, London; Dr. D. J. Leech, London; The Honorary Secretary of the Royal Institution, London; Mr. E. L. Hussey, Oxford.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Centralblatt für die Medicinischen Wissenschaften—Nature—Revue Médicale—El Siglo Medico—Galveston Medical Journal—Canada Lancet—American Bookseller—Leeds Express, February 19—Finsbury-park Journal, February 19—House and Home—Occasional Notes—Dublin Journal of Medical Science—Gazzetta degli Ospitali—Washington National Board of Health Bulletin—Hampshire Telegraph and Sussex Chronicle, February 14—Edinburgh Courant, February 24—Michigan Medical News—Revista de Medicina—Boston Medical and Surgical Journal—Supplement to the Queensland Government Gazette—Indian Medical Gazette.

BOOKS AND PAMPHLETS RECEIVED—

Transactions of the Odontological Society of Great Britain, vol. xii., No. 4—Syphilis et Mariage, by Professor Alfred Fournier—Norris on the Discovery of an Invisible or Third Corpuscular Element in the Blood, Abstract with a Critical Note by Mr. Ernest Hart—Annual Report of the Supervising Surgeon-General of the Marine Hospital Service of the United States for the Fiscal Years 1878 and 1879—Contributions to Cardiac Pathology, by J. Cockle, A.M., M.D.—Monthly Report on the Health and Meteorology of the Parish of St. Marylebone during January, 1880, by John Whitmore, M.D.—On the Internal Use of Water for the Sick, and on Thirst, by J. Forsyth Meigs, M.D.—Tottenham Sanitary Association Report, 1879—Malignant Degeneration of a Fibroid Tumour of the Uterus, by Drs. Albert N. Blodgett and Clifton E. Wing, Boston—Glasgow Royal Asylum, Gartnavel, Report, 1879—Proceedings of the North-Western Association of Medical Officers of Health for the Year ending February, 1879—Notes on Diseases of the Testis, by Samuel Osborn, F.R.C.S.—Indian Notes, by F. R. Hogg, M.D., Surgeon-Major—Index to Clinical Transactions, vols. i.-xii., 1868-79—On the Quantity and Quality of the Water supplied to London during 1879, by Charles Meymott Tidy, M.B., M.R.C.S., F.C.S.—Remarks on the Mode of Admission to our Medical Charities, by J. Thorburn, M.D., M.R.C.P.—Spence's Metal, by Granville Cole, Ph.D.—Report of the Bourton-on-the-Water Cottage Hospital, 1879—On Absorbent and Antiseptic Surgical Dressings, by Sampson Gamgee, F.R.S.E.—The Legal, Medical, and General Stores (Limited) Catalogue—Leprosy, by W. Munro, M.D., C.M.—House and Home, vol. ii.—Queensland Report of the Meteorological Observer for the Year 1877.

APPOINTMENTS FOR THE WEEK.

February 28. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

ROYAL INSTITUTION, 3 p.m. Mr. Saintsbury, "Dryden and his Period."

March 1. Monday.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 4 p.m. Prof. W. H. Flower, "On the Comparative Anatomy of Man."

ROYAL INSTITUTION, 5 p.m. General Monthly Meeting.

MEDICAL SOCIETY OF LONDON (Annual Meeting, Ballot 7½ p.m.), 8½ p.m. Dr. J. Braxton Hicks, "On Variations of Abdominal Tension and their Clinical Significance."

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 8 p.m. Annual Meeting Report, and Address of the President.

2. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

ROYAL INSTITUTION, 3 p.m. Prof. Schäfer, "Physiology of Muscle."

PATHOLOGICAL SOCIETY, 8½. The President—Specimens of Syphilitic Osteitis. Mr. H. Morris—Pulsating Tumour of the Cranium. Dr. Hoggan, "On Degeneration and Regeneration of the Axis-Cylinder in Non-Traumatic Lesions." Dr. Thin—Fungus of Tropical Ringworm. Dr. Pye-Smith—Primary Cancer of Liver. Mr. Walsham—1. Pedunculated Fatty Tumour; 2. Horny Growth from Eyelid. Mr. Hulke—Drawings of Cancer. Dr. Norman Moore—1. Aneurism of Mitral Valve; 2. Disease of Pulmonary Valves. Mr. Startin—Case of True Leprosy.

3. Wednesday.

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Lister), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.; National Orthopædic, Great Portland-street, 10 a.m.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 4 p.m. Prof. W. H. Flower, "On the Comparative Anatomy of Man."

EPIDEMIOLOGICAL SOCIETY (University College), 8 p.m. Surgeon-Major Dr. W. G. Don (Army Medical Department), "On the Endemic Continued Fevers of Sub-tropical Latitudes."

OBSTETRICAL SOCIETY, 8 p.m. Specimens: Dr. Godson—Dissection of a Two-Headed Monster. Mr. Alban Doran—Pelvic Viscera, showing Congenital Communications (1) between Rectum and Vagina, (2) between Rectum and Urethra. Dr. Hayes—Anteflexed Uterus. Paper: Mr. Lawson Tait, "On Axial Rotation of Ovarian Tumours, leading to their Strangulation and Gangrene: Three Cases successfully treated by Immediate Ovariotomy."

4. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

ROYAL INSTITUTION, 3 p.m. Prof. Dewar, "Recent Chemical Progress."

HARVEIAN SOCIETY (Council Meeting, 7¾ p.m.), 8½ p.m. Mr. G. C. Coles, "On Cases of Cyphosis." Dr. P. Boulton, "On the Typical Development of Children."

5. Friday.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 4 p.m. Prof. W. H. Flower, "On the Comparative Anatomy of Man."

ROYAL INSTITUTION (Council Meeting, 8 p.m.), 9 p.m. Mr. H. N. Moseley, Deep-Sea Dredging and Life in the Deep Sea."

VITAL STATISTICS OF LONDON.

Week ending Saturday, February 21, 1880.

BIRTHS.

Births of Boys, 1346; Girls, 1313; Total, 2659.
Corrected average in the 10 years 1870-79, 2603·4.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	1007	1009	2016
Average of the ten years 1870-79, corrected to increased population	906·8	885·0	1791·8
Deaths of people aged 80 and upwards ...	...	...	83

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa
West	561359	4	2	11	2	13	1	...	1	1
North ...	751729	3	1	9	2	57	...	4	...	1
Central ...	334369	...	4	5	...	15	...	2	...	2
East	639111	...	6	10	2	20	...	3	1	5
South	967692	6	5	22	5	66	2	8	1	5
Total	3254260	13	18	57	11	171	3	17	3	14

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·235 in.
Mean temperature	46·7°
Highest point of thermometer	54·9°
Lowest point of thermometer	39·2°
Mean dew-point temperature	42·9°
General direction of wind	S.W.
Whole amount of rain in the week	1·12 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, Feb. 14, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1880.*	Persons to an Acre. (1880.)	Births Registered during the week ending Feb. 14.	Deaths Registered during the week ending Jan. 14.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3664149	48·6	2659	2016	54·9	39·2	46·7	8·17	1·12	2·84
Brighton	107321	45·6	66	25	52·4	40·0	45·9	7·72	1·39	3·53
Portsmouth ...	134224	29·9	77	47	...	...	...	...	...	...
Norwich	85827	11·5	53	58	54·0	40·0	46·3	7·95	1·04	2·64
Plymouth	74993	53·8	48	54	53·8	38·5	47·1	8·39	1·53	3·89
Bristol	213536	48·0	139	102	54·2	36·5	45·6	7·56	3·73	9·47
Wolverhampton ...	75970	22·4	60	29	52·5	33·5	42·7	5·95	1·24	3·15
Birmingham ...	394738	47·0	292	169	...	...	...	...	...	...
Leicester	129912	40·6	82	49	...	...	...	...	...	...
Nottingham ...	173627	17·4	137	102	55·2	34·3	44·3	6·84	1·11	2·82
Liverpool	544056	104·4	399	253	...	...	...	...	...	...
Manchester ...	363130	84·6	266	183	...	...	...	...	...	...
Salford	185786	35·9	168	85	...	...	...	...	...	...
Oldham	115413	24·7	88	44	...	...	...	...	...	...
Bradford	197196	27·3	125	81	52·0	34·2	43·8	6·56	1·37	3·48
Leeds	318929	14·8	219	131	54·0	34·0	43·3	6·28	1·17	2·97
Sheffield	304938	15·5	180	126	54·0	36·0	44·8	7·12	1·64	4·17
Hull	149627	41·2	115	79	54·0	35·0	43·9	6·61	1·02	2·59
Sunderland ...	116730	42·2	91	47	55·0	38·0	44·3	6·84	0·92	2·34
Newcastle-on-Tyne	149366	27·8	108	60	...	...	...	...	...	...
Edinburgh	229839	54·8	151	98	51·9	35·2	44·3	6·84	0·56	1·42
Glasgow	589598	97·7	401	291	51·0	37·0	44·5	6·95	0·81	2·06
Dublin	314666	31·3	193	228	54·3	27·3	44·7	7·06	1·14	2.90
Total of 23 Towns in United Kingdom	8633571	39·2	6117	4357	55·2	27·3	44·8	7·12	1·32	3·35

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·24 in. The highest reading was 29·70 in. at the beginning of the week, and the lowest 28·65 in. on Tuesday morning.

* The figures for the English and Scottish towns (except for Nottingham, Salford, and Oldham) are the numbers enumerated in April, 1871, raised to the middle of 1880 by the addition of nine years and a quarter's increase, calculated at the rate which prevailed between 1861 and 1871. Revised estimates have been adopted for Nottingham, Salford, and Oldham, based upon special returns of inhabited houses existing within those boroughs. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

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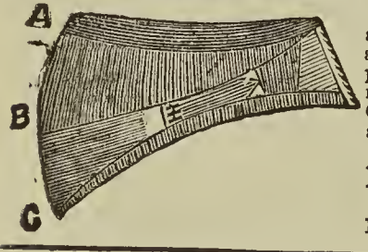

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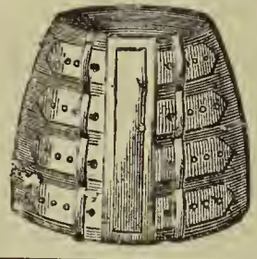

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ORIGINAL LECTURES.

THE GULSTONIAN LECTURES ON EPILEPSY.

Delivered before the Royal College of Physicians.

By W. R. GOWERS, M.D., F.R.C.P.,

Assistant-Physician to University College Hospital, Physician to the National Hospital for the Paralysed and Epileptic.

Lecture I.—Part II.

The next point which demands consideration is how far age and sex influence the occurrence of the hystero-epileptic or co-ordinated forms of convulsion. We have seen that, of 1000 cases in which the form of convulsion could be ascertained, it was co-ordinated in 185, or 18½ per cent. At every age the proportion of females is greater than of males. Under ten these cases constitute 15 per cent. of the male and 18 per cent. of the female cases. Between ten and twenty the difference is, as might be expected, much greater. They constitute 14 per cent. of the male, and no less than 26 per cent. of the female cases. Between twenty and thirty the percentage of the males remains the same (14), and that of the females falls slightly (to 21). Between thirty and forty, the male cases with hystero-epileptic symptoms fall to 12 per cent., while the females present a slight rise and constitute 24 per cent. In the male cases commencing over forty none of this character occurred; and in women, although 29 cases of the series commenced over forty, only 1 presented these symptoms. Thus cases with hystero-epileptic symptoms commence almost exclusively under forty. In males, they bear at each age nearly the same proportion to the cases of pure epilepsy, decreasing very slightly from a maximum in childhood to a minimum in middle life. In women their minimum is in the first decade; their maximum is in the second; and the proportion after adolescence remains nearly double that of males during the period in which they occur. I think, however, that some surprise will be felt at the fact shown by these figures—which my actual observation of attack fully confirms—that, even up to the fourth decade of life, one-third of the cases presenting hystero-epileptic phenomena occur in males.

I pass next to consider the information which this series of cases affords as to the exciting causes of epilepsy. The first point which demands attention is the causation of the large number of cases which begin in the first three years of life. Of these, 180 in number, no information was forthcoming in about one-third. In 24 cases, although information was obtained, no cause could be ascertained. In 97 cases, however, a cause for the first fit was assigned. In 2 it was exposure to the sun; in 1 ascarides; in 7 an acute disease; in 8 a fall; and in 8 the first fit occurred soon after birth, the labour in several of these cases having been difficult, and in some the forceps employed. In the remaining 72 cases, 33 males and 39 females, the first fits occurred during dentition, and were attributed to teething. The percentage of neurotic heredity in these cases was nearly the same as for the whole of life—34 per cent.

Thus nearly two-thirds of the cases beginning in infancy, the conditions of origin of which could be ascertained, arose from the so-called dentition convulsions. It seems legitimate to ascribe to the same cause a similar proportion of the cases respecting which no information was forthcoming. If so, we have a total number of cases due to this cause which constitutes 7 per cent. of all the cases investigated.

Few persons who have attended closely to the diseases of children can fail to be convinced of the truth of the opinion long ago urged by Sir William Jenner, and now widely accepted, that almost all convulsions associated with dentition are really due to the constitutional condition of retarded development which we call rickets, to the irritability of the nervous system which accompanies this condition. The further details of the cases I am considering fully confirm this, for in a large number there was a history of late teething, late walking, and in many of crooked limbs.

Even these facts probably do not represent fully the influence of rickets in the production of epilepsy. In many of the cases just described, the course of the attacks was continuous from infancy to adult life. In others, however, there were intermissions, especially during the period of childhood. In several, for instance, the fits ceased at seven, to recommence at ten or eleven years. Now, in 27 other cases which commenced after the period of childhood was over, repeated convulsions had occurred during the first dentition, accompanied in many with other signs of rickets. It seems reasonable to ascribe to these convulsions of infancy a share in predisposing to the convulsions of later life, and the addition of these cases raises the number in which a causal influence may with probability be ascribed to rickets, to nearly 10 per cent. of the whole.

Whether rickets is or is not entirely preventable, there can be little doubt that in the degree in which it leads to convulsions it is always preventable by proper attention to the diet and hygiene of infancy. These facts, therefore, suggest that a considerable proportion of the cases of epilepsy are really within the range of preventable diseases. They suggest also that inherited taint exerts the same influence here as at other periods of life, predisposing to the occurrence of convulsions in backward children, and to the persistence of the fits, and that the management of children with such inherited taint should be a subject of extreme care.

The statements made by patients as to the causes of their fits have of necessity to be received with caution, and the facts carefully investigated. An occurrence so striking as a fit is naturally assumed to be due to some cause at least discoverable, and so is often attributed to a remote and improbable antecedent. Of 1150 cases in which this point was noted, a reasonable cause for the first fit was given in 428, or 37 per cent., and in the remainder no probable cause could be ascertained. From this series the cases distinctly originating in dentition-convulsions are excluded.

An exciting cause is met with in males much more frequently than in females: in 44 per cent. of men (235 out of 537 cases), and in only 31 per cent. of women (193 out of 616 cases)—a difference between the sexes of 13 per cent. This can scarcely be accounted for by greater exposure to exciting causes, since some of these act more on the female sex; it seems to indicate a greater predisposition on the part of women.

If we examine the proportion of cases in which an exciting cause can be traced in the different periods of life, we find that under ten it is nearly the same for both sexes (males 41, females 40 per cent.). From ten to twenty there is a great difference between the sexes, excitants being traceable in 19 per cent. more males than females (males 47, females 32 per cent.). In the next two decades, twenty to forty, the percentage in men continues the same (at 42 per cent.); but in women it rises (to 35) in the first, and falls (to 32) in the second. In the cases which occur over forty years of age the percentage in each sex is about equal (40); but in the male cases commencing over fifty an exciting cause could be traced in as high a proportion as two-thirds. Thus the most striking peculiarity is the large proportion of cases which commence in women between ten and forty years of age without any discoverable exciting cause to which they can be ascribed.

Of all the immediate causes of epilepsy the most potent are psychical—fright, excitement, anxiety. To these were ascribed 157 cases, more than one-third of those in which a cause was given, and one-seventh of the whole series. Of the three forms of emotion fright takes the first place with 119 cases, 10 per cent. of the whole. The relation of this cause to age is, however, very distinct. It is effective chiefly in early life, when emotion is the most ready, and is most powerful at the transition from childhood to adult life, while after middle life it is almost inactive. Of the 119 cases only 3 commenced after thirty years of age, and 100 commenced under twenty. Of these, the majority, 70, commenced between ten and twenty, only 30 cases under ten. The female sex is notoriously the more emotional, and accordingly the disease, as Dr. Sieveking and others have pointed out, resulted from fright in a larger proportion of females than of males, although the difference is, perhaps, less than might be expected—71 females and 48 males, 60

and 40 per cent. respectively. It is notorious also that the difference between the sexes in emotionality increases as life advances. In childhood one sex is as emotional as the other, but with puberty men become far less emotional than women. The influence of fright as a cause of epilepsy is in strict harmony with this fact. Under ten years of age the sexes suffer equally. Between ten and twenty the males are to the females as 3 to 4; between twenty and thirty as 3 to 13; and over thirty the only cases due to this cause occurred in women. After seventeen only 3 cases occurred in men, while 20 occurred in women.

The influence of this cause is accurately recognised in popular phraseology, and is easily comprehensible when we consider how powerfully fright affects the nerve-centres. The stimulation of the motor centres shows itself in the sudden muscular actions, such as the start of alarm, which, no doubt, originates in the need for immediate action which danger often entails. The tremor, which often persists, indicates the enduring disturbance of the nerve-centres. In the organic nerves the vaso-motor centre is first stimulated and then inhibited, the sphincter centres are released from control, the sweat nerves are excited, and the heart's action is accelerated, perhaps by inhibition of the vagus; and the last effect is the most constant, the most ready.

The exact form of fright varied, of course, in different cases, but the list teaches many lessons. In no less than 8 cases the cause was some stupid practical joke—as a pretended ghost; in 2 cases children were shut up in dark cupboards; in 5 cases the fright was from an alarm of fire, in 6 from burglars; in 6 cases the patient had watched other persons in fits; 3 resulted from alarm during severe thunderstorms; 1 case was that of a soldier who had his first fit a few hours after being terrified, while on sentry duty, by the unexpected appearance of some goats.

Of 76 cases in which the interval between the fright and the fit was noted, the fit occurred immediately in 28, or one-third; within a few hours in 16. The interval was between a day and a week in 19, and it was more than a week in 13.

As might be anticipated, in a considerable number of cases the fits were of the hystero-epileptic type. Of 90 cases, in 61, or two-thirds, they were purely epileptic; in 29, or about one-third, they were hystero-epileptic. The difference between the two sexes in the frequency with which hystero-epilepsy succeeds fright is not great. Of 51 cases in females, 18, or 35 per cent., were hystero-epileptic. Of 39 cases in males, 11, or 28 per cent., were of this type.

A relation can be traced between the interval that elapses before the fit and the character of the attack. The longer the interval, the smaller is the proportion of hystero-epileptics. In the cases in which the interval was more than a week, only 18 per cent. were of this character; in the cases in which the interval was less than a week, but more than a day, the percentage of this form was 21. In the cases in which the interval was only a few hours the percentage was 25, while in those in which the fit occurred immediately no less than 57 per cent. were hystero-epileptic.

Other forms of sudden emotional excitement caused the first fit in 19 cases—9 males and 10 females; and these cases also occurred during the emotional period of life, under thirty years of age. Anxiety was the only traceable cause in 29 cases, and in these males preponderated (16 males to 13 females), and 7 occurred over thirty years, 6 of these being men.

Next in numerical importance among the exciting causes of epilepsy are traumatic influences, blows and falls on the head. To these, after the elimination of doubtful instances, 65 cases were due. A third (21 cases) occurred under ten years, rather more than a third (25 cases) between ten and twenty. Males are affected by this cause more than females, the numbers being 39 to 26. This is clearly due to the risks of occupation, for in the cases commencing before ten years the females were in excess. Between ten and forty the male cases in each decennium were rather more than twice the number of the females. Over forty the only cases were in men.

Hystero-epilepsy resulted from a traumatic cause in only a small number of cases—6 out of 44; and in estimating the significance of these it must be remembered that traumatic causes often involve intense emotional disturbance.

In two-thirds of the cases the injury was a fall on the head, in one-third it was a blow on the head. In most of the cases the patient was stunned for a time, but in only a fifth (8 cases) did the first fit occur immediately; in the rest an interval elapsed. In one-third of the cases the interval between the injury and the fit was more than a day and less than a week; in another fifth the interval was between a week and a month, and in about the same proportion the interval was more than a month.

Exposure to the sun was given as the cause of the first fit in a considerable number of instances, and in 27 it seemed probable that the statement was correct. From this cause, as may be expected, males, from their greater exposure, suffer most; 20 were males, and only 7 females. The cases were pretty equally distributed through life, but the cases in females were relatively most numerous in childhood, and decreased in adult life, to cease at thirty. The form of convulsion was almost always pure epilepsy; only 1 case presented hystero-epileptic symptoms. In 10 of the cases there was a distinct attack of sunstroke, occurring, in 6, in the tropics. In 10 the fit occurred immediately; in several others in which an interval elapsed, this was marked by some form of nerve disturbance, such as tremor.

An acute disease was the apparent cause of the first fit in 37 cases (14 males and 23 females), and in more than half (19 cases) the disease was scarlet fever; in a quarter of the cases (9) it was measles; in 5 cases it was continued fever, called typhus, typhoid, or low fever; in 1 case it was rheumatic fever; and in 1 a severe attack of diarrhœa.

The remarkable influence of scarlet fever in the causation of epilepsy demands further consideration. The cases due to this all commenced during early life, under seventeen. It may be thought that the first fits in these cases were due to uræmic poisoning, but this is not supported by the particulars ascertained regarding 14 cases. It is true that in 3 of these all that could be learned was that the first fit occurred during scarlet fever, accompanied with dropsy, and in 2 others that the fits occurred after an attack of scarlatinal dropsy was over. But in 2 other cases, in which the scarlet fever was succeeded by dropsy, the first fit occurred after the fever, before the dropsy. In 6 cases there was no dropsy; in 2 of these the first fit occurred after the fever was over, in 1 during convalescence, and in 1 a month later. In 3 cases the first fit occurred during the height of the fever, and in 1 convulsions ushered in the disease, persisted throughout the attack, and continued afterwards as permanent epilepsy. In only 1 case did ear disease also result from the fever. The urine was examined in most cases, but no albumen was found.

These facts suggest that the first fits were due to some peculiar effect of the scarlet fever poison upon the nervous system. It may be remembered that the scarlet fever poison has a very widespread action in the system, and that, after scarlet fever, optic neuritis, leading to subsequent atrophy, may occur, without renal or coarse cerebral disease.

Intestinal worms rank low as a cause of persistent epilepsy, but were noted in 6 cases, the convulsions continuing long after the worms had been expelled. In 5 cases the first attack was attributed to digestive derangement. In 1 case asphyxia, and in 9 immersion in the water, caused the first fit.

Certain toxæmic influences were the apparent cause of the disease in several cases. Of these, chronic alcoholism was the cause in a comparatively small number—13 cases only. In some the first fit occurred during intoxication, and in a few the attacks recurred after each alcoholic excess.

Six patients were the subjects of chronic lead-poisoning. In 2 of these there was also chronic renal disease. In 1 of the others the epilepsy had existed from infancy, but became much more severe when the plumbism was developed. In the remaining 3 the lead-poisoning was the apparent cause of the attacks, which resembled, in character and course, those of idiopathic epilepsy. It is well known that acute lead-poisoning may be accompanied by convulsions: that chronic poisoning may cause chronic convulsions precisely like those of ordinary epilepsy, has been pointed out by others, but is not, I think, generally known. The list of nervous disturbances which may result from lead is a long one, and includes, as cases I have seen testify, acute and chronic mental derangement, neuralgia, brachial spasm, as well as palsy, and muscular wasting and optic neuritis. It is known that lead is to be found after death in the brain in considerable quantity.

I have mentioned that in 2 of the cases of lead-poisoning

there was also consecutive renal disease. In 2 other cases of chronic renal disease, convulsive attacks, resembling perfectly idiopathic epilepsy, brought the patients under treatment. In 1 the absence of any coarse changes in the brain was proved post-mortem. It appears, therefore, that such convulsive attacks may occur and recur for months, without other sign of uræmic mischief. Several cases in which chronic mental derangement resulted from Bright's disease have also come under my notice.

I have met with no case which suggests that tobacco-smoking exerts any influence in the production of epilepsy; but in 1 case the fits were apparently due to the patient, a lad, having shortly before commenced working in a tobacco factory, where his occupation caused frequent nausea. In 1 case the first fit occurred after the administration of chloroform; and in 1, attacks, which had ceased for many years, recurred after the inhalation of nitrous oxide.

Of sexual processes, retarded or absent menstruation coincided with the first fits in a large number of the cases which commenced in girls between fourteen and seventeen, but the difficulty in determining the exact causal relationship between the two conditions is very great. Epilepsy once set up in such cases, the subsequent establishment of regular menstruation appears to exercise very little influence upon the fits. In boys who are epileptic, masturbation is unquestionably common; but here again it is most difficult to decide to what degree it can be regarded as a cause of the disease, and it was distinctly the cause in only a small number of cases. The first fit occurred, in 7 cases, during pregnancy, without other obvious cause, and in 5 cases the disease commenced after parturition.

No facts which have come under my notice suggest that acquired syphilis is a cause of idiopathic epilepsy.

There remain for consideration two conditions, occasionally associated with epilepsy, in some cases causally, in others probably only by coincidence, or as the effects of a common cause—these are heart disease and chorea.

An abnormal condition of the heart was noted in 93 cases, but this does not represent the proportion of the whole in which abnormality existed, since in many its condition was not noted. I have, however, rarely failed to examine the heart in epileptics, and I think that the proportion of cases of valvular disease is not far below the mark. In 8 cases there was extreme frequency of action; in 9 there was irregularity; in 13 (all young persons) there was reduplication of the first sound. In 30 cases there was valvular disease, mitral regurgitation in 20, mitral constriction in 7, aortic regurgitation in 3, and aortic constriction in 1. There was obvious dilatation, without valve disease, in 20, and considerable hypertrophy, without renal disease, in 2. The cases of irregularity and reduplication were all observed within a comparatively short space of time, and I am sure that, had my attention been earlier directed to their frequency, I should have found them in a larger number of cases. In a few cases it seemed that the heart disease and epilepsy were in accidental association. In some cases the cardiac condition, especially simple dilatation and reduplication of the first sound, may have been a consequence of the repeated strain to which the heart had been subjected during the attacks. But in other cases, especially of valvular disease, there was reason to believe that the heart disease existed before the epilepsy, and in many there was no other etiological condition to which it could be ascribed.

In 20 cases of epilepsy the patients had also suffered from chorea. The relation between the two diseases was as follows:—In 8 cases epilepsy existed before the chorea. In 12 the chorea occurred first; in 4 of these the fits began at the time of the chorea and persisted afterwards. In only 2 of these was there heart disease. In 5 cases the fits occurred long after the chorea, the interval being four, six, twenty-seven, thirty, and forty years respectively. In 1 case peculiar choreic convulsions occurred at the height of the chorea, but passed away as the disease lessened, and did not recur. It seems probable in the cases in which the fits immediately succeeded the chorea, and possible in the cases in which an interval elapsed, that the impaired nutrition of the motor centres during the chorea may have left a predisposition to further disturbance under the action of some other exciting cause.

In the next lecture I propose to consider the illustrations presented by the cases of some of the symptoms of the attacks.

ORIGINAL COMMUNICATIONS.

THE PATHOLOGIES OF CHOREA IN THEIR APPLICATION.

By OCTAVIUS STURGES, M.D.,
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I HAVE more than once insisted in this journal that no theory of chorea can be accepted which fails to satisfy the actual conditions of the case and that the life phenomena of the affection may always be adduced as giving to every hypothesis an antecedent probability or the reverse. There are certain facts of chorea which are obvious and unquestionable, as that it is a child's disease, that it very much prefers the female sex, that it is apt to recur, that it affects the arms and hands and face more often than the legs, that recovery is the common rule and death or any permanent disablement the rare exception, and so forth. Whether, therefore, it be alleged that embolism or thrombosis or perivascular softening or "disturbance" in some motor centre or "toxic influence" is at the root of chorea (and all these theories have their supporters), each of these conditions in turn must be brought into harmony with the known symptoms of the disorder it professes to explain.

Now if this comparison be fairly made I think it will appear:—

1. That there is no morbid condition as yet anatomically described which, so far as we know, is capable of producing symptoms at all similar to those of chorea.

2. That the hypotheses which, apart from demonstration, really provide the best for the actual phenomena of chorea do not in fact present any distinct picture of a definite morbid change.

3. That having regard to the special characteristics of chorea it is difficult to conceive of any morbid condition whatever, anatomically demonstrable, at all calculated to produce it.

1. Of the morbid conditions associated with chorea and sometimes actually seen in connexion with it there is none which has attracted so much attention as cerebral embolism. Now the ordinary symptoms and course and cause of this obstruction we know. Making allowances for the great diversity of response to all cerebral injury whatever as well as for modifications due to the extent of the plugging and the size or situation of the vessels concerned our actual information under these headings may be summed up generally as follows:—(*a*) For symptoms: a sudden vertigo or an acute head pain with faintness or sickness; a more or less complete hemiplegia; impaired intelligence and sensation; and, if the hemiplegia be right-sided (as it most often is), aphasia or total inability to utter articulate sounds. (*b*) For course: a gradual but interrupted decline or an incomplete and precarious recovery; contraction or wasting of the affected side; a special liability to recurrence of the first fit; often a fatal termination by way of coma. Such, or such like, clinical features of embolic cerebral obstruction are accounted for by reference to its morbid anatomy, its usual seat being mainly determined by the distribution of the middle cerebral artery, *the left rather than the right*, while secondary softening is an early consequence of the original accident. (*c*) For cause: the conditions which belong to degeneration and the conditions which belong to endocarditis and to the blood of acute rheumatism and of the puerperal state. In other words the conditions of advanced life and of the time between puberty and middle age. Such I say is the general description of cerebral plugging so far as it has been observed clinically and anatomically. How far does it apply to chorea; to a disease confined almost to childhood, favouring the female sex, with no partiality for one side more than the other, which is seldom sudden in its access, which hardly ever exhibits aphasia, which produces no special wasting of the affected muscles, which implies hardly any danger whatever to life or limb, and which begins to disappear at that precise period of life when, with the greater frequency of endocarditis and the commencement of degenerative changes, the liability to embolism and thrombosis is largely increased? Putting together all that we know of the plugging of cerebral vessels, large or small, in its symptoms, associations and subjects, it is directly opposed to all that we know in

respect of chorea.(a) If it could be shown that this particular morbid condition was constantly present in chorea the observation would offer a new difficulty, we should still have to look elsewhere for the structural basis of the disorder.

But we have still to inquire upon what ground of actual observation this doctrine of vascular plugging in chorea depends. "I am aware," says a very candid and fair advocate(b) of this belief, "that the morbid anatomy of chorea is not considered to lend much support to the attractive hypothesis of embolism." Drs. Wilks and Moxon have never met with microscopic emboli in any instance. In one case where, together with chorea, hemiplegia had followed embolism, "there were no discoverable emboli in the small vessels." These authors are unable, indeed, to recognise any constant morbid appearance after death in chorea. Similarly Dr. Gowers and Dr. Ferrier have failed to discover emboli after diligent search. It is not too much to say that instances of minute embolism in association with chorea are conspicuous by their rarity. Cases of the kind, as those of Dr. Broadbent and of Dr. Tuckwell,(c) are repeatedly quoted but it is admitted that they conflict with the general experience. If this theory of vascular plugging is to be established it must be as Dr. S. Mackenzie intimates, "upon evidence of a clinical and physiological nature." Where is such evidence to be found? It would appear, on the contrary, that the condition of minute vascular plugging, whether of embolism or thrombosis, is both insufficient, so far as our knowledge goes, to account for the special phenomena of chorea and, as a matter of fact, only exceptionally met with in connexion with it.

The same may be said in part of the nervous changes pointed out by Dr. Dickinson. These have been found invariably in the seven fatal cases actually examined (cases, it must be insisted, not all of them dying by chorea, since in at least three the disorder was of no great severity), and may be shortly described as consisting in spots of perivascular degeneration distributed symmetrically throughout the brain and cord, and originating in arterial injection with subsequent extravasation.(d) Now although Dr. Dickinson has found this condition wherever he has looked for it (not only in chorea but, as will be seen on reference to his paper, in diabetes as well), it is obviously not the kind of change we are in search for and, being found, it is impossible, without a revolution in physiology, to reconcile with it the actual phenomena of chorea. How can these degenerated spots symmetrically arranged, affecting the cord as well as the brain, and tending to ultimate destruction of nerve-substance, be compatible with a disorder which is transitory and often one-sided and which almost always leaves the functions of the cord unimpaired? How, indeed, can those who appeal exclusively to anatomy to explain disease be content with but one set of changes for affections so diverse as disseminated sclerosis, diabetes, and chorea?

The difficulty has been felt and expressed. And accordingly in place of a pathology which claims to have the direct sanction of anatomical observation we are offered hypotheses which have been expressly framed to meet the actual conditions of the case, hypotheses which, while still insisting in part upon some physical change, eke out the rest by means of some of those general expressions, imputing blame to the blood or the vessels, which are so ready of service where demonstration fails. Thus, for example, we have Dr. Bastian's doctrine of chorea as being due to "disturbed nutrition" of the corpora striata "issuing often in subacute inflammation of those centres and characterised in part by the production of minute multiple emboli, a condition originating in an altered state of blood."(e) Now so far as this account is merely descriptive, Dr. Bastian himself calls attention to the scantiness of its direct evidence, and to the possibility of confounding what "lies at the root of the disease with other hyperæmias more or less secondary in duration and mode of origin." And for whatever is beyond mere description, the disturbed nutrition and altered blood state, there are many difficulties in the way of accepting these assertions in any definite sense. "Disturbed nutrition," indeed, is hardly a tangible expression, but any theory of chorea which needs the supposition of a blood-change is at once negatived by clinical facts. Chorea attaches to no special blood-state, it occurs to the plethoric as well as the anæmic, while all the "blood-poisons" that we know of serve rather to remove than to excite it. Even in the case of acute rheumatism it is commonly not until the fever has ceased that the chorea comes.

And so by degrees and with the gradual substitution of hypothesis for observation we come at last to theories which are *all* hypothesis, a mere writing out of the symptoms of chorea in physiological phrase, where, although some morbid change or other is still implied, no attempt is made to reconcile the actual phenomena with any definite localised lesion. It is felt, indeed, that this task of reconciliation becomes the more perplexing just in proportion as anatomical description becomes the more explicit. It is easy to accommodate chorea to general expressions of altered nutrition and disturbed nerve-centres, it is most difficult to accommodate it, even in theory, to any morbid condition whatever that we have actually seen and of which we know the common course and issue.

Take for example the well-known opinions of Dr. Hughlings-Jackson upon this subject. "The great elaborateness of the movements in chorea" has led this author to the conclusion that the convolutions are the parts diseased. But if the character of the movements requires this assumption what shall be said of their seat and variableness? With the supposition of diseased convolutions we have not only to provide for aphasia and mental disturbance and "head symptoms," we have also to dispose of the fact that very limited injury to certain regions of the cortex whether irritative or destructive will produce either spasm or paresis and never chorea. In the list of cases which Dr. Ferrier has collected there is not one which lends the slightest support to the belief that the movements characteristic of childish chorea are among the consequences of any brain lesion as yet described. But the disparity does not stop here. It extends to the particular muscles implicated in the two cases. In cortical lesions the leg and the arm are usually affected together, a fact supposed to be explained by the close relation of the leg and arm centres, while in the few instances of exception it is the leg that is affected first. It is notorious that in chorea the two hands or the arms and shoulders are far more commonly affected than one side or one leg.

It thus appears that the pathology of chorea which really takes into account and satisfies the actual phenomena of the disorder does so in fact by eluding anatomical description altogether. It may borrow its phrases, it is not restricted to what they imply. The gist of the explanation lies always in some convenient expression which we are bound to accept but which is so little definite as to advance us nothing in actual knowledge.

2. It is this that I mean in saying that the hypotheses which provide the best for the actual phenomena of chorea do not in fact present any distinct picture of a definite morbid change. Take, for instance, the late Dr. Todd's description,(f) which refers chorea to a debilitated state of the system which with the aid of a peculiar diathesis produces a more or less enfeebled nutrition leading, upon adequate cause, to a disturbance of the centre of emotion. Or take Dr. Handfield Jones's(g) statement (I do not profess to give it in full but only with reference to the point in question), that the "motor or emotional centres fall into a state of paresis." Or take the several beliefs variously expressed of some "toxic influence" or of some eccentric irritation. It would be impossible, I say, to deny the occasional relevancy of such descriptions, but how much are we the better for them? They are in fact but translations of what we see and know. Wherever the voluntary muscles are beyond control we may reasonably impute blame to the region which presides over movement. Wherever there is over-emotion we may credibly ascribe it to a disturbance of the centre of emotion. Similarly we may have "toxic matter" and "peripheral irritation," and each of these in its own way may generate this same "peculiar condition" which we call

(a) The connexion of chorea with acute rheumatism and with childbearing may be alleged to the contrary. But the rheumatic connexion, as I have endeavoured to show elsewhere, is rare and in its nature peculiar; while the chorea of child-bearing, as Dr. Barnes has pointed out, is almost always but the revival of a former and childish chorea.

(b) Dr. S. Mackenzie, *British Medical Journal*, December 23, 1876.

(c) *Medical Times and Gazette*, 1875, page 482; *British and Foreign Medico-Chirurgical Review*, 1867; *St. Bartholomew's Hospital Reports*, vol. v.

(d) *Medico-Chirurgical Transactions*, vol. lix., page 15.

(e) *British Medical Journal*, page 67, 1873.

(f) "Clinical Lectures, Nervous System," page 442.

(g) "Functional Nervous Disorders," page 361.

chorea. But observe that whenever these wholly metaphysical accounts of morbid influence and irritation can be brought fairly into the light, whenever they assign some definite pathological state, as for instance anæmia or some specified poison, then at once they can be met and confuted.

But it may be said the lesions of chorea are real enough but from their nature "they are not susceptible of anatomical demonstration."(h) The symptoms are transitory and paroxysmal and death comes too late to give any account of them. In this respect the disorder resembles epilepsy and other convulsive or spasmodic diseases the nature of which must be investigated at the time and in the working. It must be answered that the actual physical condition upon which the paroxysms of epilepsy or of nervous asthma immediately depend if not known is at least being hopefully sought for. Take the epileptic fit for example. There are the materials to work with in the pallor of the face, the condition of the retinal vessels, the definite methods by means of which the fit may be produced or averted and its frequent dependence upon direct mechanical pressure or the retention of particular elements of disintegration. And not only in disease but at will, by the drain of blood, by section of one of the lateral columns of the cord or by irritation of the cerebral cortex we can *obtain* epilepsy. Whatever the *modus operandi*, whether the brain be anæmic or hyperæmic or first one and then the other, there is ample evidence in those phenomena of the fit that are constant of a profound vascular change of some sort. The symptoms and associations of epilepsy are definite and invariable. It has a recognised place in the category of diseases. Very different is the position of chorea. There is no known means of producing it artificially and no known disease which (to put it at the highest) is habitually associated with it, while as regards the condition of the cerebral circulation during the indefinite time that chorea drags on we have proof upon every test that can be applied that there is no change of the kind that we are in the habit of recognising as morbid.

(*To be concluded.*)

CASES OF SECONDARY AMPUTATION OF THE LEG.

By E. L. HUSSEY, F.R.C.S.

Case 1.—On Friday, December 1, 1854, a miller, thirty-two years of age, was in the upper part of his mill, "putting on more power" to the machinery. While so employed, one of the stones flew in pieces; and a large piece struck him in the middle of the right leg. On recovering from the effects of the blow, he managed to get down a ladder, to walk to his house, about twenty yards distant, and then to get up a flight of stairs to his bedroom. Although there was a large wound in the leg, with muscle and bone protruding, no medical assistance was sought till Sunday. The patient lay in bed, with the limb on a pillow. There was some oozing of blood, but not loss enough to alarm him or his family.

On Sunday night, December 3, I saw him in consultation with Mr. Mallam of Hook Norton and the late Mr. Pritchard of Sibford. Both bones of the leg were fractured and comminuted in the middle third, with extensive laceration of the integument and muscle. The extremity of the fibula, with much of the muscular substance, was protruding. There was an offensive watery discharge from the wounds. The pulse was quick and weak, and the skin hot.

The patient's consent was readily obtained to the amputation proposed. He was put under chloroform, and the leg was amputated below the knee,—about fifty-five hours after the accident.

The patient recovered favourably. He is now living and in good health.

Case 2.—A farmer, thirty-six years of age, while occupied on July 6, 1861, in disengaging the machinery of a mill on his farm from the steam-engine, which he thought was at rest, had the calf of the leg pinched between the end of the horizontal piston and the brickwork in which the end of the rod worked. The limb was also scalded by an escape of steam. A large and hard swelling afterwards formed in the back of the leg. This was punctured on August 25 by a medical practitioner with a trocar in two places. On the 30th the two openings were united by an incision; and a probe was passed, to ascertain the nature of the swelling. On September 3 a sudden and profuse rush of blood took place from the wound; and a large amount was lost before any professional assistance was obtained. The patient became delirious under the loss. In the emergency I was summoned, in consultation with the late Dr. Morris of Deddington. I had no doubt that the swelling was a false aneurism, from rupture of one of the large arteries; and that the proper course was to amputate the limb.

With Dr. Morris's assistance, I amputated the leg below the knee. The patient was so much exhausted by the previous loss of blood that I did not think it prudent to put him under chloroform.

On examination of the amputated limb, the soft parts appeared to be much disorganised, and the different tissues were not easily distinguished; but I discovered two large openings in the posterior tibial artery. There was not any fracture of bone.

The patient recovered. He is now living and in good health.

Case 3.—A married woman, fifty-two years of age, wife of a labouring man, was admitted, January 19, 1866, into the County Asylum at Littlemore with a recent attack of mania. She had suffered from an attack of fever about twelve months ago; and after recovery, it was observed that her right leg had become almost useless.

On January 6 she went from home by railway to a village eight miles distant, on a visit to her sister. In the afternoon she wandered from the house, not knowing, in fact, where she went. She tried to cross a brook. The water was between three and four feet deep, and she could not get out on the other side. After a time, her cries for help were heard; and help was obtained. She was then pulled out of the water, and taken back to her sister's in a wheelbarrow. She remained there without receiving any medical attendance. On the 12th she was taken home to her husband's cottage, when the foot and ankle were observed to be much distorted, and the parts red and swollen. On the 13th she was seen by Dr. Hemming, the medical officer of the parish. He detected a fracture of the malleolus, and he placed the limb in splints. These were removed by the patient. Under Dr. Hemming's advice she was afterwards removed to the Asylum.

On the 21st I saw her in consultation with the Medical Superintendent, the late Mr. Ley. The right leg was partially paralytic. The foot was inverted, and had the general appearance of talipes equino-varus. There was a large sloughing ulcer on the dorsum and outer aspect, exposing the bones, and laying open the ankle-joint. Both malleoli were broken off. The astragalus was loose and almost separated from its connexions; the articular cartilage on the inner side was worn away by the pressure of the broken end of the tibia. There was a free discharge of thin pus.

On the 26th, with the help of Mr. Ley and Mr. Sankey, the leg was amputated below the knee, the patient being placed under chloroform. The stump healed favourably.

The patient's recovery was retarded by the formation of an unusually large slough on the sacrum and the back of the pelvis. This healed eventually. Her general health improved; and she was sufficiently recovered to be discharged from the Asylum in May, 1867.

Case 4.—On March 22, 1867, a gentleman, fifty years of age, was driving himself in a light carriage on four wheels. The horse became troublesome, and, escaping from control, ran away with the carriage. In the attempt to restrain the animal by forcibly pulling at the reins, with his feet pressed for support against the footboard, the floor of the carriage gave way. To save himself from falling through, with the certainty of being dragged at the horse's heels, he jumped out. In alighting on the ground, he received a compound fracture of the right leg. A carrier's cart happened to be passing at the time. He was lifted into this, and taken to an inn in the neighbourhood. Mr. Marshall of Wallingford was here called to his assistance. He secured the limb in splints, for greater safety in making the journey home. A carriage was then obtained, and the patient was taken to his own house, about ten miles distant. He then placed himself under the care of the late Mr. Stone of Abingdon.

On April 3 I saw him in consultation with Mr. Stone. There was a deep and extensive wound leading down to the

(h) Dr. Hughlings-Jackson, *British Medical Journal*, December 23, 1876.

fracture. The tibia was fractured in the middle third, and the broken extremities of the bone could be seen at the bottom of the wound without any appearance of repair. The course of the fibula could not be traced in the middle of the limb in consequence of the general swelling; but there was no doubt, from the relative position of the malleoli, that that bone was broken as well as the tibia. The foot was everted, and firmly fixed between the malleoli; and it was not possible, by any efforts we made, to bring it to its proper position. There was a free purulent discharge, but not of a good consistency; and the patient's general health was beginning to suffer. It was manifest that there was no other course to pursue but to remove the limb. This was done on the 26th, with the assistance of Mr. Briscoe, Mr. Stone, and Mr. P. Martin.

Upon dissection, it appeared that the fibula was broken in its middle third, and that the sharp point of the lower piece had been forced obliquely upwards into the shaft of the tibia, on its outer aspect, where it remained firmly fixed in the compact tissue about an inch above the spot where the tibia was broken. It required the exertion of a considerable degree of force to withdraw it.

The patient recovered. He is still living, and in good health.

Case 5.—A married woman, fifty-eight years of age, the mother of a large family, and a free drinker, was admitted into the Radcliffe Infirmary under my care, April 4, 1863, with a compound fracture of both bones of the left leg, extending into the ankle-joint, and with a large bruise on the sacrum. The injuries were received in a fall downstairs when in a state of drunkenness.

The limb was adjusted, and placed in splints in a good position. Some time after admission she suffered from a troublesome attack of diarrhœa; but this subsided under the administration of pulv. cretæ comp., with opium and kino.

Erysipelas afterwards appeared on the limb. This was followed by suppuration in the deep-seated parts, with sloughing of fascia and tendons. All appearance of reparative process ceased. The bones of the ankle-joint and tarsus were exposed in the wound, and the cartilage had disappeared from the articular surfaces.

Notwithstanding the allowance of a generous diet, with brandy, her strength began to decline; and, as there was no hope of a union of the bones, or even of a restorative action being established, the leg was amputated on May 15.

On the 24th she complained of sore throat, with difficulty of swallowing. Next day the jaw was fixed, and the general symptoms of tetanus declared themselves. She died early in the morning of the 28th.

(To be continued.)

THE FRENCH PHARMACOPŒIA.—The Minister of Public Instruction has decided upon the preparation of a new edition of the French Codex, or official formulary of medicinal and pharmaceutical preparations—a measure that has been long wished for. The first edition of the Codex was published in 1818, the second in 1837, and the third and last in 1867. Since 1867 pharmaceutical science, as well as other sciences, has made great progress. New preparations and new remedies have entered the domain of therapeutics; but as these new comers have not as yet been admitted to take their place in the sacred formulary, those who manufacture them or offer them for sale are liable to judicial procedures.—*Union Méd.*, February 17.

"MEDDLESOME MIDWIFERY IS BAD."—A pupil of the late Dr. C. B. Meigs, Professor of Obstetrics in the Jefferson Medical College, relates the following incident:—The professor entered the lecture-room, and, placing his manuscript on the desk, pronounced this text in a very deliberate and serious manner, "Gentlemen, meddlesome midwifery is bad." Then, turning over the leaves for a few minutes, repeated, "Meddlesome midwifery, I say, is bad." Then walking backwards and forwards several times, he returned to the desk, and repeated, "I say, gentlemen, meddlesome midwifery is bad." After a long pause, he resumed, "Gentlemen, I do not know that I could occupy the hour allotted to my lecture in any better way than by repeating, iterating, and reiterating, 'Meddlesome midwifery is bad.'" —*Louisville Med. News*, February 7. [This was the favourite phrase of the late Dr. Blundell, of Guy's Hospital, frequently repeated during the operative part of his course.]

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

ROYAL SOUTHERN HOSPITAL, LIVERPOOL.

A CASE OF RHEUMATIC FEVER—ULCERATIVE ENDOCARDITIS—ABSCESSES IN WALL OF LEFT VENTRICLE.

(Under the care of Dr. CARTER.)

CATHERINE M., aged fourteen years, was admitted into the Royal Southern Hospital, Liverpool, under Dr. Carter, on February 4, 1880, suffering from her first attack of acute rheumatism. Scarlatina when an infant, from which she recovered without any complication, was her only previous illness. Parents healthy. The present attack had commenced five days before admission, with pain and swelling in the knees and ankles, and headache. On admission, the knees were swollen, tender, and very painful, the ankles but slightly affected, and the upper extremities free. No headache, dyspnœa, or pain in chest. Heart's sounds normal. Free perspiration. Tongue furred. Bowels said to have been freely purged several times during the preceding night. Temperature 104·9° Fahr.; pulse 114; respirations 40.

The knees and ankles were wrapped in cotton-wool, and seven grains and a half of salicylate of soda ordered with fifteen minims of bromhydric acid in acetate of ammonia mixture every hour for the first six hours, then every second, third, or fourth hour, according to circumstances. Between 2.15 and 10 p.m. the temperature fell from 104·9° to 99·4°, but without the relief to symptoms which usually accompanies the fall, the pain in the knees on the morning of the 5th being no better, and headache and great thirst being complained of. The salicylate was given every fourth hour, and omitted in the morning. There had been much delirium during the night, and the tongue was brown and the pulse weak. An effervescing mixture containing four grains of free carbonate of ammonia in each dose was prescribed, with a teaspoonful of brandy in water every hour. The temperature continued low until the 7th, when it rose to just over 100°; rising further suddenly to 103·4° at 6 p.m. on the 8th, nine hours before her death. A slight sense of discomfort in the left chest was complained of when she was first seen, to relieve which sinapisms were applied. No friction sound was heard till the morning of the 8th. She gradually became weaker; the face grew very dusky; delirium, mostly low and muttering, became continuous; and she died exhausted at 3.30 a.m. on the 9th. The urine voided during the night of the 8th contained salicylate and a slight amount of albumen. This latter had not previously been present.

The chief points observable at the post-mortem examination, which was made eleven hours after death, were the following. A fine layer of exudation with a roughened granular surface coated the opposing layers of the pericardium. Immediately behind the posterior flap of the mitral valve, eating into the wall of the left ventricle, was an oval, ragged-edged ulcer about the size of a fourpenny-piece. In the muscular wall of the left ventricle were six small abscesses, the largest being about as big as a horse-bean. This one was at the apex of the heart, and its existence was clearly indicated externally by the whitish colour of that portion of the ventricle. None were found in the septum. Both kidneys had a number of small pyæmic abscesses scattered through them. All other organs were apparently healthy.

The probable course of events was—acute rheumatism with its customary high temperature; the formation of the ulcer; pyæmic infection of the wall of the ventricle and of the kidneys; and secondary fever due to the pyæmia after the temperature had become normal. Whether the pericarditis was due to the rheumatic poison or to the mechanical irritation of the slightly prominent abscess at the apex is not clear; but it is certain that no friction sound was heard till the morning of the 8th, though careful daily stethoscopic examinations were made.

BERLIN CITY HOSPITAL.

A CASE OF CROUP IN AN ADULT—EXTENSIVE FORMATION OF FALSE MEMBRANE IN TRACHEA—TRACHEOTOMY—DEATH.

(Under the care of Dr. MAX SCHEDE.)

[For the following notes we are indebted to Mr. Albert Leahy, late Surgical Registrar, Charing-cross Hospital.]

F. R., a strong and healthy woman, aged twenty years, suddenly began to complain of stiffness and soreness of her throat on February 16, 1880. She was then in service, and there was no history of exposure to diphtheritic infection. During the course of the day the pain in the throat became gradually worse, and was accompanied by hoarseness. In the evening, her breathing being much embarrassed, a medical practitioner was called in, who ordered six leeches to be applied to the throat. The leech-bites continued to bleed for some hours after the detachment of the leeches, and the bleeding had to be controlled by the application of liquor ferri perchloridi. On the following day she was sent into the hospital.

On admission she was very anæmic, was suffering very greatly from inspiratory dyspnœa, complained of slight stiffness in the region of the thyroid cartilage, and had a peculiar spasmodic, hoarse, dry, metallic cough. Temperature 38·8° Cent. (101·8° Fahr.); pulse 100. Her throat was carefully examined, but nothing was found except some slight injection of the fauces. Inhalations of steam were ordered.

February 18.—At 4 a.m. the dyspnœa increased, the breathing became very noisy, stridulous, and sibilant, and she had two paroxysms of suffocative coughing. An inhalation of aqua calcis and glycerine was ordered every three hours. At 8 a.m. she had a violent paroxysm of coughing, great dyspnœa, both inspiratory and expiratory, became very cyanotic, and had pulsation of the external jugular veins. She became so bad during this attack that it was considered necessary to perform tracheotomy, which Dr. Schede did. The trachea was reached and opened without difficulty, and a thick yellowish-white false membrane was extracted by the opening. This membrane was found to form a complete cast of the entire interior of the trachea and of the right and left bronchi; it was half a line thick, and was strongly adherent (especially at the upper part of the trachea) to the mucous membrane. At 12 noon, four hours after the operation, she was much easier, breathing almost normally. Pulse 90; temperature 38·1° Cent. (100·6° Fahr.). The inhalations were ordered to be continued. At 8 p.m. her breathing again became embarrassed, and she had a paroxysmal attack of coughing. She was slightly delirious, tried to get out of bed several times, and complained of intense thirst. Pulse and temperature as before. There was then a quantity of muco-purulent discharge from the tracheotomy-tube and powerful action of the extraordinary muscles of respiration.

19th.—At 4 a.m. the patient had two attacks of dyspnœa, and complained of utter inability to move her limbs, but there was no anæsthesia of any part of her body. The respirations were much increased in frequency, the cyanosis became more marked, and there was falling in of the lower ribs and intercostal spaces during inspiration. On examining the chest there was found to be dulness over the bases of both lungs posteriorly, and loud bubbling râles were heard. Pulse 120, soft and feeble; temperature 39° Cent. (102·2° Fahr.). 1 p.m.: The dyspnœa has increased, and the cyanosis is more marked. The area of dulness on both sides is enlarged, and fine crepitus over the same region is distinctly audible. After this the discharge from the trachea entirely ceased, patient rapidly became comatose, and died at 2 p.m., three days after the first appearance of the symptoms.

Autopsy, eighteen hours after Death.—The whole body is well nourished. The muscles are everywhere dark in colour. The upper portions of the lungs on both sides are distended with air; the lower lobes are very dark and intensely congested. The mucous membrane of the pharynx, tonsils, and epiglottis is to all appearances perfectly healthy. Upon opening the larynx and trachea, the whole of the interior of the latter is found to be covered by a false membrane, having exactly the same appearance as the one which was extracted during the operation of tracheotomy. This extends as high as the true vocal cords, and below into the right and left bronchi, where it ceases. The smaller bronchi are filled with a muco-purulent secretion, and the lower lobes of the lungs sink when placed in water. The false membrane is strongly adherent to the underlying mucous membrane, which is intensely injected, but not ulcerated at any part. The right side of the heart is full of black fluid blood, and there is a large fibrinous clot in the left ventricle. It should have been stated that the patient was menstruating during her illness, and recently-ruptured Graafian vessels were found in both ovaries. The other organs were healthy.

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Medical Times and Gazette.

SATURDAY, MARCH 6, 1880.

THE INDIAN MEDICAL SERVICE.

We republish in full, in another part of our present issue, from the *Gazette of India*, an order abolishing the dual medical administrative staff hitherto maintained for the Army in India. From the 31st of the present month the British Army Medical Department and the India Medical Department will form one, for the medical administration of the Army in the three Presidencies. That the administration of the Military Medical Service in India ought to be under one head can hardly be seriously disputed. It will be generally admitted that the dual system was unnecessarily costly, was cumbrous and complicated, and that during active service in the field it was at times productive of grave inconvenience and much discomfort Some reform and reorganisation as our Indian empire increased in extent became a necessity. But the measures by which the reorganisation has been effected and the manner in which it has been carried out are open to very grave objections, and appear to be calculated to excite serious discontent in the Indian Medical Service. Instead of saying that the two medical departments will in future form one, the change made would be more correctly described as one by which the Indian Medical Service is converted into a subordinate department or section of the Army Medical Department. True, it will be seen on reference to the Order, that the administrative officers of the Army Medical Department in India are reduced by two Deputy

Surgeons-General, three Superintending Surgeons-Major, two Secretaries to Surgeons-General, and one Statistical Officer. But in the Indian Medical Service the rank of Surgeon-General is swept away altogether, and six Deputy Surgeons-General's appointments are abolished. No officer of the Indian Medical Service can ever again attain the highest rank in the Military Medical Service, and the number of officers of the next rank is reduced by more than half. The full effects of the changes will not be understood unless it is remembered that the rank of Surgeon-General gave on retirement an extra pension of £350 per annum, and that of Deputy Surgeon-General one of £250 per annum. No Indian officer can in future gain the larger pension, and much fewer can look forward to gaining the smaller one. The only compensation offered for this immense change is that the Government of India have offered "to the Surgeons-General and the Deputy Surgeons-General their retirement on the extra pension of their grade, with an honorary step of rank, notwithstanding that they may not have completed the qualifying service for those pensions." The number of retirements was restricted to two in each Presidency, and applications to retire had to be made by March 1, the Order having been published on January 3. No consideration seems to have been given to the disappointment and loss inflicted on the Senior Surgeons-Major of the Service, who had a right to look forward hopefully to promotion ere long to the grade of Deputy Surgeon-General, and its extra retiring pension of £250 a year. But the *Indian Medical Gazette* appears to think the new Civil medical arrangements may afford them some compensation, and it will be well to wait for the Civil Order before dealing more fully with the subject. We will only further now say a few words on the way in which the change in the Indian Medical Service has been effected. In 1863 the Government of the day tried to effect the amalgamation of the Indian Medical Service with the Army Medical Department by means of a Bill introduced into Parliament; but the Government was defeated on division, and the Bill was rejected. The blow now inflicted on the Indian Service has been inflicted suddenly by means of an Order; and though it was dated January 1 of this year, not a hint of the change was given to the candidates for commissions in the Indian Medical Service at the recent competitive examination!

THE METROPOLITAN WATER-SUPPLY.

Late on Tuesday night, or, rather, early on Wednesday morning, this week, the Home Secretary brought into the House of Commons his Bill "to make further provision for the supply of the metropolis and the adjoining populous places with water." The pith of his speech explaining the Bill will be found elsewhere in our columns. The property and powers of the eight companies by which the metropolis is supplied, more or less imperfectly, with water are to be transferred by agreement—not on compulsion—to a new body, to be called the Metropolitan Water Trust, which is to have absolute power over the supply of water to the whole of the metropolis. The objects—or, according to Mr. Cross, the main objects—of the Trust will be the supply of pure and wholesome water for drinking and other domestic purposes, for watering the streets, for extinguishing fires, for manufacturing purposes, and the maintenance, as far as possible, of a constant supply. The aggregate sum to be paid this year for the property thus acquired will be £22,000,000; and the ultimate maximum cost is stated at £31,000,000. For the payment of this a 3½ per cent. Water Stock is to be created, and all the companies have agreed, through their directors, to take the whole of the purchase-money in this stock—secured, first, by all the water-rates of the metropolis, and secondly, by the whole of the rates of the metropolis and of the City of London. Mr. Cross does not imagine that the general rates will ever be called upon for so much as sixpence, but still they will be charged as a further guarantee of the new stock. The total sum to be paid to the existing companies is undoubtedly very large, but, if the expected benefits are at all fully realised, the money will have been well spent. The Water Trust is to consist of twenty-one members. Three of them—the chairman, a vice-chairman of works, and a vice-chairman of finance—will be salaried; the first to receive £2000, and each of the vice-chairmen £1800 a year. The first holders of these offices will be appointed by the Government, and, after the first appointments, the election will be left to the Trust itself. The Lord Mayor and the Chairman of the Metropolitan Board of Works will be *ex-officio* members, and there will be four nominated and twelve elected members. Of the nominated members, one is to be nominated by the President of the Local Government Board, one by the Chief Commissioner of Works, one by the Commissioners of Sewers of the City of London, and one by the Metropolitan Board of Works. Ten of the twelve elected members are to be elected by the ratepayers in the ten metropolitan Parliamentary boroughs, one for each borough; and the other two will be elected, one by the water-ratepayers north, and the other by those south of the Thames, living outside the limits of the Parliamentary boroughs. All the nominated members will hold office at the pleasure of the authorities nominating them, and the elected members for periods of five years.

It would be, of course, absurd to attempt any criticism of a scheme of such magnitude and complexity as this is at first sight. All that can be said of it is that it affords good ground for a hopeful settlement of the great question with which it deals; and that great credit is due to Mr. Cross for the promptness with which he has redeemed the pledge he gave regarding the matter at the end of last session. He proposes to have the Bill referred to a hybrid committee. We may add, as a matter of interest, that it is proposed to create two descriptions of water stock—the ordinary, upon which interest is to commence in July next; and the deferred, to begin to receive interest at variable periods. The amounts of the purchased ordinary stock to be received by the companies are as follows:—The New River, £6,080,000; the East London, £3,223,600; the Southwark, £2,098,000; the West Middlesex, £3,134,000; the Lambeth, £2,217,500; the Chelsea, £1,302,000; the Grand Junction, £2,306,000; and the Kent, £1,737,600. The rate of interest on both ordinary and deferred stocks is 3½ per cent. The first thing that strikes anyone in considering these proposals is the enormous amount of money dealt with. It would be out of our province to lay before our readers any opinions which personally one may entertain on this subject; but, in spite of everything, the enormity of the sum sticks to those who are not shareholders in these companies. It is well known that every possible plan has been tried to increase the hypothetical and real value of the existing works and plant, and it will become a serious question whether, were this amicable settlement proposed by Government adopted, we should not be paying too dearly for our whistle. If the measure is opposed on the ground of cost, as very likely it may be, good-bye to any chance of the present Parliament settling the matter. And it would still be a question whether the Government or Parliament would care to push a disputed measure of such magnitude through a moribund House. From the long-suffering consumers' view we might have much to say about defective and inadequate plant which would speedily need renewal, of what must follow on any scheme for improved water-supply, improved domestic fittings of landlords and

tenants, vestries, roads, and sewers,—all will have to be considered, and we doubt if time will be left for all that this year.

DR. BALLARD ON ANIMAL VACCINATION.

We recently alluded to an important paper by Dr. Ballard, published in last month's *Practitioner*, and which is to be found *in extenso* in another column of our journal. The paper deserves this more extended attention, both from its intrinsic value and from the author's official position at the Local Government Board.

Dr. Ballard begins by noticing the grounds on which he says animal vaccination has been demanded. These, he says, are, first, the assertion—groundless, in his estimation—that the protective value of humanised lymph is less now than it formerly was; and secondly, the risk in arm-to-arm vaccination of inoculating with syphilis. As regards the former of these, Dr. Ballard says that the outcry against the efficacy of humanised lymph has to a great extent been based on misconception of the evidence derivable from the small-pox epidemic of 1871-72. This, as he points out, was no ordinary outbreak. It made its appearance in Brittany, and thence, owing to the conditions imposed by the Franco-German war, rapidly spread, assuming as it did so a more and more angry character. When it reached this country, chiefly through the medium of French refugees, it came upon the back of one of our ordinary outbreaks of small-pox, and speedily impressed on the comparatively simple character of this its own more malignant stamp. As usually happens, the epidemic markedly diminished the numbers of the unprotected, so that after a time, when the outbreak had burnt itself out, the average number of deaths from small-pox became much less than usual. But the reason for this is, in part at least, that above indicated. A large proportion of the unprotected had suffered from small-pox—a result not to be confounded with the beneficial influence of vaccination, but the outcome of any epidemic, however slight. Unfortunately, too, it is impossible meanwhile for the Government statistics to be founded on anything save deaths. Attacks are not reckoned; consequently, though the greater or less fatality of an outbreak may thus be registered, its extent can hardly be so. Especially the resultant evils cannot be recorded, and these are very often of great importance. Roughly, we can estimate some of them by the fact that persons marked with small-pox have, since the epidemic, become much more numerous than had been the case for long before it. This might be attributed to imperfect vaccination, or to the wearing out of its effects; but if vaccination is to be a Governmental affair, both ought to be provided against. Dr. Ballard himself points out that in many cases the vaccination is improperly performed; but we were always under the impression that results only, not processes, were registered, and we cannot see why an imperfect vaccination result should be accepted as a perfect one. Taking, then, the fact that an unusually severe epidemic, in 1871-72, was in part accounted for by many imperfect vaccinations previous to that date, with the admission by Dr. Ballard that many vaccinations are even now imperfectly performed, we cannot but think that if the system is to be fully carried out, something more is incumbent on Government than they have yet attempted.

Touching the ground of syphilis, we cannot think that Dr. Ballard has duly appreciated the risk of it, especially at times when there is an unusual demand for vaccine lymph. It is quite true that public vaccinators see little of such mischances, but the reason has been pointed out by Mr. Hutchinson. They never see the infant at the period after vaccination when the syphilitic infection would have manifested itself. Nor is it always easy to separate the effects of hereditary syphilis, especially apt to appear about the time of vaccination, from those of the malady freshly introduced. But conceding, as we are all willing to do, the greatest possible anxiety on the part of public vaccinators to do what is right in such cases, we cannot overlook the fact that there is a risk which can and ought to be avoided where parents do not of their own accord choose to incur it. It may at once be conceded that, with the healthy child of healthy parents, vaccinated with pure lymph, there is no risk. But all these conditions cannot be invariably guaranteed; hence we say, give the option between human and heifer lymph. We do not contend for more than this; but we must continue to urge the importance of removing everything which can be interpreted as an objection to a process which is known to be so beneficial in its results as vaccination when properly carried out. Dr. Ballard tells us that in several instances a fresh starting-point has been obtained for the vaccine lymph in use by the employment of heifer-lymph, and that "on no occasion has the Board given any indication of disapproval." This, as it seems to us, is either too much or too little encouragement. If heifer-lymph is actually approved, some further steps ought to be taken to facilitate its employment, were it only for purposes of comparison. If the principle is only *laissez faire*, we are bound to condemn it as indicating a want of decision in carrying out laws and regulations which all sane men admit to be of importance.

There is only one other point on which we desire to comment—that is Dr. Ballard's comparison between the initial success of vaccination with animal and humanised lymph. The figures given show that the "taking" of the vaccine virus, if we may use the phrase, is decidedly on the side of English operators and humanised lymph, as compared with operators abroad who use calf-lymph; but to afford any proper ground of decision between the relative merits of the two, we ought to have the corresponding conditions where humanised lymph is used abroad, and heifer-lymph at home. Putting that entirely on one side, we would ask this question: Is a vaccinator in this country satisfied with his results should he fail once or even twice with human lymph? As far as we know, the practice is to change the lymph and try again. Surely the same rule would apply to heifer-lymph; if one introduction does not succeed, another ought to be tried, until success or failure manifests itself. Such arguments will not hold good for a moment, and so, too, of the "non-disapproval" position of the Board. Such a position is not tenable. Vaccination with heifer-lymph is either of so much importance that it ought to be encouraged to the extent of giving facilities for its use equal to those now given for humanised lymph, or it ought actually to be condemned and its use resisted. The latter position we cannot expect the Board to take up; we hope to see it boldly face the responsibilities of the other.

THE LICENSING BODIES AND THE GENERAL MEDICAL COUNCIL.

The following concludes our analysis of the replies made by the licensing bodies as to their compliance with the Recommendations of the General Medical Council:—

27. That "it is not desirable" that any University should confer any degree in Medicine or Surgery "upon candidates who have not graduated in Arts, or passed all the examinations required for the B.A. degree, or passed, after due course of education, examinations such as are, *bonâ fide*, academically equivalent to those required for a degree in Arts." All the Corporations observe, naturally, that this Recommenda

tion does not affect them; but the Irish College of Physicians "strongly objects" to the last alternative, and the Irish College of Surgeons "deplores very much" that the Recommendation is not adopted by all the Universities, and "would strongly urge the General Medical Council to make it compulsory,"—which, we may remark, the Council have not the power of doing. The practice of the Universities of Oxford and Cambridge is "conformable"; in Durham the Recommendation "is not literally carried out, but a higher examination is required in Arts"; and the University of London does not require graduates in Medicine to graduate previously in Arts. The Universities of Glasgow and St. Andrews say their practice is "conformable"; that of the University of Edinburgh is "conformable to the last alternative clause"; and the University of Aberdeen, after remarking that "the degree of B.A. does not exist in the Scotch Universities," gives at length the list of subjects comprised "in the preliminary examination in general education fixed by the Scottish Universities' Commission of 1861" for the degrees of Bachelor of Medicine and of Master of Surgery. The University of Dublin conforms with the first part of the Recommendation, but disapproves of the last alternation.

28. That "it would be desirable, as a general rule, that none of the higher degrees or qualifications in Medicine or Surgery should be conferred on persons who have not shown evidence of higher professional attainments." In England, the Colleges state that their practice is "conformable," and the Recommendation does not concern the Society of Apothecaries; the practice of the Universities of Oxford, Cambridge, and Durham is in conformity; and the University of London makes no comment. In Scotland, the College of Physicians has "always been of opinion that a better test of the suitableness of candidates for its higher qualifications in Medicine is afforded by the production of unexceptionable evidence as to professioual and social standing than by the institution of additional examinations,"—still, about three years ago "a committee was appointed to consider whether any and what changes should be introduced into the procedure for election to the membership and fellowship"; but since the introduction of a Government Medical Act Amendment Bill no further steps have been taken in the matter; the College of Surgeons "attends to the Recommendation"; and the fellowship of the Glasgow Faculty is conferred by election, candidates being required "to satisfy the Faculty in regard to their professional status, attainments, and moral character"; the practice of the Universities is "conformable." In Ireland, the licensing bodies all state that their practice is in conformity with the Recommendation, but the College of Surgeons excepts cases in which its higher qualification "is conferred *honoris causâ*."

29. That "it is desirable" that the licensing bodies should limit and define by schedule the extent of examination in several subjects, as Chemistry, Physiology, and Materia Medica. A recent Recommendation. In England, the College of Physicians have considered aud adopted it, applying it also to Botany and Pharmacy; the College of Surgeons observes that an arrangement of the kind is proposed under the Conjoint Scheme; and the Apothecaries' Society adopts it "as far as possible"; the Universities of Cambridge and London comply with it, and those of Oxford and Durham do not. In Scotland, the practice of the Corporations is in conformity as regards Chemistry; the University of Edinburgh limits and defines the extent of examination in Chemistry, Botany, and Natural History, that of Aberdeen in Chemistry and Botany; in that of Glasgow the parts of Botany and of Zoology with which a candidate is required to be specially acquainted are usually published, but a general knowledge of the whole of the subjects is required; and at St. Andrews no limits are defined, but the University is prepared to comply to the same extent as the other Universities. In Ireland, the College of Physicians considers the Recommendation "impracticable," the College of Surgeons has left "such details very much to the discretion of the examiners," but reserves to itself "the power to limit and define the nature and extent of the examinations if necessity should arise"; at the Hall the precise *extent* is not defined; and the University of Dublin "considers the Recommendation unadvisable."

30. "Recommends" that examination of a candidate in any subject shall never be wholly conducted by the lecturer or teacher in that subject in the school in which the candidate has been educated. In all the divisions of the kingdom the practice of all the bodies is "conformable."

31. "It is desirable" that observation with the microscope should form a part of the examination for a licence. The practice of all the bodies is in conformity with this.

32. It is "recommended" that candidates for the final examinations be required to give evidence that they "have had opportunities of practical study, with care of patients, as pupil, assistant, clinical clerk, or dresser, in hospital, dispensary, or elsewhere." In England and Scotland, all the bodies practically comply with this; but in the University of Oxford it "is not enforced by statute, though probably it rarely occurs that candidates have not been hospital dressers and clerks." In Ireland, the College of Physicians "approves" of the Recommendation, but "owing to the great difficulties of carrying it into effect, it is not required for the licence of the College, though it is for the membership"; the College of Surgeons has frequently had it under consideration, "but, owing to the limited accommodation in the hospitals, the matter is beset with difficulties,"—the examinations are, however, conducted partly at the bedside, and students are tested in the use of surgical appliances; the University of Dublin "considers the Recommendation impracticable, owing to the present arrangement of hospitals."

33. It is "desirable that candidates should understand that in examinations in Anatomy they may have to perform actual dissections, and that in examinations in Surgery they may have to perform one or more operations on the dead subject." In England, at the College of Physicians, "operations on the dead subject always form part of the examinations in Surgery,"—dissections are not mentioned; at the College of Surgeons, the practice is "not conformable"; the Society of Apothecaries do not examine in Surgery, and have no dissecting-rooms, but examine in Anatomy "on the living subject, by dried and preserved specimens, and by plates, and by written and oral questions and answers"; in the Universities of Oxford and Cambridge, dissections are required; and in those of Durham and London the whole Recommendation is "complied with." In Scotland, the College of Physicians complies, "so far as possible," but is hindered by "the scarcity of subjects"; the College of Surgeons complies; the regulations and practice of the Glasgow Faculty are conformable as regards dissection; in the University of Edinburgh, "candidates are examined practically in Anatomy and Surgery, and may be called upon to perform dissections"; in that of Aberdeen, dissections are not required, as care is taken that candidates have carefully dissected the body in the school; in Glasgow, the practice is "conformable"; and the University of St. Andrews "examines practically in Anatomy and Surgery by the aid of wet and dry preparations." In Ireland, the practice of the College of Physicians is conformable as regards Anatomy;

the College of Surgeons and the University of Dublin always require the performance of dissections and of operations; both the Colleges are strongly of opinion that examinations in Anatomy and Surgery should test *every* candidate in performing dissections and operations; the regulations of the Apothecaries' Hall "are in conformity with the Recommendation."

Those who have taken the trouble to read through these replies to the inquiry made by direction of the House of Commons' Committee have most likely been surprised to learn how largely the Recommendations of the General Medical Council have been complied with by the licensing bodies. We suspect that even the members of the Council have themselves been agreeably surprised to find what slight foundation there has been for the charge, so persistently made, that they have permitted licensing bodies to treat them with contempt and to ignore their Recommendations. The great fault to be found is, we think, with regard to the preliminary examinations, and even here only a few of the licensing bodies fall short of what the Council desire. The greatest show of contumacy is exhibited on the other side of the Irish Channel, and we believe that a very little more firmness and insistency on the part of the Council would lead to speedy compliance even there. Then it must be remembered that some of the "Recommendations" are of very recent date; that some are not, strictly speaking, "Recommendations," but only expressions of the opinion of the Council that such-and-such things are "desirable." And, after all, it is to be remembered that the medical authorities are bodies of as great experience in medical education as the Council collectively, and may fairly differ from the Council as to the wisdom or practicability of some things that may at first seem highly desirable.

TWO IMPORTANT LEGAL DECISIONS.
WHAT IS A "NOXIOUS THING"?—WHAT IS LUNACY, AND WHAT PERVERSENESS?

We elsewhere republish from the columns of the *Times* two legal decisions of the highest importance to members of our profession. Unfortunately, as will be seen, the first leaves unsettled a point which has never yet been raised in such a way as to come before this Court, but which is animadverted on by two of the judges, Mr. Justice Denman and Mr. Justice Field. As regards abortion, the law as now laid down is simple enough. If a person administers, with intent to produce miscarriage, something which, as administered, is noxious, he administers a "noxious thing." The doubt seems to have arisen, at the trial which related to the administration of the oil of juniper, from a mistaken view of the now famous ruling of Lord Chief Justice Cockburn in consultation with Mr. Justice Hawkins at the Cornish Assizes some time ago. There a person was indicted for administering cantharides for their supposed erotic qualities, not for purposes of procuring abortion, but the man was discharged on the ground that there was not enough of the cantharides so exhibited to do any harm. The evidence, on which we strongly commented at the time, was clear enough in one way; but the authorities (?) who appeared to give evidence as to the poisonous effects of cantharides were of the most doubtful description. It is plain that this decision must be revised. Views may differ as to the different effects of different quantities of any remedy or poison, and we are not to judge, from the effect any medicine may produce on a navvy, as to what evil it might work on a child or delicate female.

The second decision is not less important to the many members of the profession of medicine or their widows who add to their incomes by receiving "nervous cases." Many people have a horror of what are called madhouses, and are glad to get relations of doubtful sanity taken care of at private houses not licensed as lunatic asylums. It is now affirmed that "everyone whose mind is so affected by disease that it is necessary for his own good to put him under restraint" is a lunatic. What of habitual drunkards not coming under the new Act? Will this simplify the law of lunacy?

THE WEEK.

TOPICS OF THE DAY.

The First Lord of the Admiralty last week presided at the fifty-ninth annual Court of the Dreadnought Seamen's Hospital Society, held at Willis's Rooms. The interest which is taken in this charity by foreign countries, on account of the ready assistance it affords in illness to seafaring men of every nationality, was demonstrated by the attendance, amongst a large number of gentlemen, of the Swedish and Japanese Ambassadors; and before the close of the proceedings it was announced that the Empress of Germany had spontaneously sent a donation of £20 with a desire that her name be added to the list of patrons, while the King of Sweden had also promised a donation of £25. The report stated that the annual subscriptions during the past year showed a net diminution of £200, as compared with the receipts from that source during the previous year. An effort was about to be made to increase the subscription-list to £2000 per annum, to enable the Committee to place the income upon a sound basis. The Chairman eloquently pleaded for the support of the public in aid of a charity which he maintained had special claims upon the people of this country. The report was unanimously adopted.

At the Marylebone Police-court, recently, Mr. De Rutzen called attention to the great number of women who had lately been brought before him on charges of drunkenness. On one day fifteen women were so charged; on the following day eight; and on the next ten. This state of things, Mr. De Rutzen observed, was perfectly disgraceful, and in future more severe sentences would have to be inflicted for drunkenness; there was a marked increase in it, and it was a miserable thing to see woman after woman brought before him day after day for this vice. In all cases but first offences the women were sent to prison without the option of a fine.

A system of fraud, which the *Times* correspondent designates as audacious, has lately been discovered in the Medical Faculty of the University of Naples. Its registers being open to public inspection, presumably without any supervision, an ingenious scamp hit upon the scheme of making clandestine entries, and obtaining official certificates from the authorities who did not detect the interpolations. For these certificates he obtained sums of money from various persons, some of whom have practised and actually received parochial appointments on the strength of them. One of the latter, who in 1870 underwent twelve months' imprisonment for deserting from the army, has already been arrested as an accomplice. Diplomas have also been forged, and some of these go back two years.

The Duke of Connaught last week presided at a dinner held at Willis's Rooms, in aid of the funds of the Samaritan Free Hospital, and, in proposing the toast of "Health and Prosperity" to the institution in question, remarked that it seemed almost incredible that not so many years ago there was not in existence in the metropolis even a single ward especially devoted to the diseases of women. At that time there was only a small back room in the populous district of Marylebone, rented at the rate of 5s. a week, in which poor delicate women and children were enabled to obtain

medical assistance. Since then the present Hospital, as well as others, had been established, which was in every sense free for the reception and treatment of diseases peculiar to women, no letter of recommendation being required, poverty and sickness constituting the only qualifications. In answer to the appeal of his Royal Highness, the sum of £1700 was collected during the evening.

In the Queen's Bench Division of the High Court of Justice, last week, a singular objection was raised to the conviction of persons for not having their children vaccinated, viz., that vaccination itself produces small-pox, and is therefore illegal and contrary to the Act. Mr. Tomlinson appeared on behalf of a person who had been convicted under Section 31 of the Vaccination Act, and he objected that the conviction was bad, as being contrary to the next Section (32), which sets forth that any person who shall wilfully communicate small-pox shall be deemed to commit an offence. Mr. Justice Lush inquired if it was really meant to be shown that vaccination is a communication of the disease called small-pox; and on being told that this was what was contended the Judge remarked that the Court really could not listen to such an objection; and the application was rejected accordingly.

At the February meeting of the Middlesex magistrates, which was held last week, Mr. Robinson moved that the plans and estimates now submitted to the Court for the construction of extra works at Banstead Lunatic Asylum, at a cost not exceeding £40,000, be approved. The proposed additions include two infirmaries, the one to hold seventy-two males and the other seventy-two females, an infirmary for female attendants, and a contagious hospital. In proposing the resolution, Mr. Robinson explained that they were now face to face with the awkward fact that they had in the county many more lunatics than there was accommodation for. An amendment was moved, that the further consideration of the plans be postponed until after the reception of the report of the Banstead Committee at the April Quarter Sessions, on the ground that the expenditure of the county was growing at too rapid a rate. After some discussion, in which it was pointed out that the asylums of the county were at the present time all full, and that it would be very expensive to send the patients, who were greatly on the increase, to be taken care of at other places, the amendment was negatived, and the original motion was agreed to, it being also decided that the plans and estimates should be forwarded to the Secretary of State for his approval.

The annual meeting of the Corporation of the Edinburgh Royal Asylum for the Insane was held last week, Lord Provost Boyd presiding, when many influential gentlemen interested in the institution were present. The report presented showed that the daily average number of patients in the East House, paying a higher rate of board, was 112, being an increase of 11 as compared with 1878. In the West House the number was 700, being 25 more than last year. The marked increase in the number of patients paying the higher rates of board was mainly attributable to the additional accommodation afforded for such patients in the mansion of Craighouse. The Lord Provost, in moving the adoption of the report, said it was exceedingly gratifying to the managers to be able to present such a satisfactory document. The purchase of Craighouse had fully realised all the anticipations that were formed about it. In three months from the time it was ready for occupation, in March last year, it was quite full. A cottage had in addition been occupied by the higher class of patients, and the payments made by this class had added greatly to the financial strength of the Asylum. Altogether, he believed he might safely state that matters connected with the Asylum were never more prosperous than at the present time. His lordship in conclusion referred to the value of the services of Dr. Clouston, the Physician-Superintendent, whose report on the Asylum we hope to notice at some other time.

The authorities in different parts of the country are—not at all too soon—awaking to the fact that the disgraceful trade in diseased meat must be severely dealt with. Last week two butchers having shops in Oxford Market, and in the city of Oxford, were charged at the City Court with having diseased meat in their possession. One of them was fined £45 and £2 11s. costs, or three months' hard labour; and the other £20 and £2 14s. costs, or two months' hard labour. A determination was also expressed by the Bench to sentence such offenders in future to imprisonment without the option of a fine. So many useless warnings having now been given, both in town and country, to those engaged in this nefarious trade, magistrates might, without any imputation of harshness, relinquish the practice of inflicting fines, and substitute imprisonment in every case.

The *Army and Navy Gazette* expresses its gratification at hearing that a strict examination of the drainage system of the official residences at Devonport Dockyard has been ordered since the death of Admiral Hope from typhoid fever. This would seem to point to the suspicion that Devonport is no better off than Portsmouth with respect to the healthiness of its Government residences. We are glad to hear that Dr. Domville's widow has been given a special pension of £200 a year, and that she is also to be provided with apartments at Hampton Court Palace.

A severe outbreak of diphtheria is reported to have occurred in the children's ward of the Ludlow Union Workhouse. Nearly all the occupants have been attacked, and already two deaths have taken place. The medical officer reports, however, that the patients generally are improving, and that no fresh cases are now anticipated.

THE SELECT COMMITTEE ON THE MEDICAL BILLS.

On Friday, the 20th ult., the Select Committee of the House of Commons on the Medical Acts Amendment Bills was reappointed, and the various Medical Bills were referred to it. The Committee is as follows, and it will be seen that it is in numbers and members the same as that of last year, with the one exception that Mr. Lowe, the member for the University of London, is appointed in place of the late Dr. O'Leary:—Mr. W. E. Forster, Dr. Cameron, Dr. Lush, Sir Trevor Lawrence, Mr. Mitchell Henry, Dr. Lyon Playfair, Mr. Dalrymple, Mr. Errington, Mr. Goldney, Mr. Heygate, Lord George Hamilton, Mr. A. Mills, Mr. Serjeant Simon, Mr. David Plunket, Mr. John Maitland, Mr. Wheelhouse, Q.C., and Mr. Lowe. On Monday this week the first sitting of the Committee was held, and Lord George Hamilton was elected Chairman. It will be recollected that last year Mr. W. E. Forster was chairman of the Committee, and it will be generally much regretted that any change has been made in this respect. Mr. Forster's recognised ability, judgment, character, and impartiality, and his not being connected with any of the Bills before the Committee, made him specially acceptable as chairman; and it is, we must think, most unfortunate that his position should, in the second year of the Committee, have been given to anyone else. The Committee will meet to receive evidence on Monday next. We hear that a good deal of dissatisfaction still exists, which some hope to remove by further examination. Professors Gairdner, of Glasgow, and Struthers, of Aberdeen, are likely to be called on behalf of the Scottish Universities.

THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

The annual meeting of this Society was held, as usual, on Monday, March 1, and at it were read the various reports, which will be found elsewhere. But the notable event of the evening was a discussion which arose on a motion for rescinding a vote, made on a previous occasion, of fifty guineas towards a memorial statue of Harvey. Since that sum had been voted the Council of the Society, moved thereto by the action of Mr. Moncrieff Arnott, had taken the opinion of counsel, who held that any such donation was illegal, being contrary to the charter of the Society. Dr. Quain had taken opinion also, which was in favour of the legality of this vote. The President and Council left the question to the meeting—wherein, as it seems to us, they were distinctly wrong: either they intended to adhere to the opinion of the counsel they had consulted, or they did not. If they did, or did not, it was right that a member of the Council should *ex officio* move a resolution accordingly, but it was left entirely to the Society at large to take action in the matter. The result was, as might have been guessed, not satisfactory. For the motion that this vote should be rescinded there were twenty-two, and against the motion twenty-four. The voting was by show of hands, and a regular count was refused—rightly, we believe, inasmuch as the President had already declared the result of the voting; wrongly, perhaps, inasmuch as in such a case it would have been wiser to have taken every precaution. Moreover, when we have to do with questions of legality it is always safer to take the safe side. Something was said of its being wiser to break the law; with that we don't agree. It is to be hoped that the matter will end here, but we hear that it will not, and it would be a great pity if dissension should thus be introduced into the Society, when by a little careful management it could have been avoided. However, we shall see; and we sincerely hope these matters will rest as they are without any further turmoil.

DR. HUMPHREYS AND THE MANCHESTER CHILDREN'S HOSPITAL, PENDLEBURY.

At a special general meeting of the Manchester Medico-Ethical Association, held on February 25, the question of Dr. Humphreys and the Children's Hospital was introduced by Dr. Henry Simpson, the President, who moved the following resolution:—"That this Association, having had its attention called to the action of the authorities of the Children's Hospital, Pendlebury, in suspending Dr. Humphreys, the Senior Physician, and having considered the published statements in vindication of this action, hereby records its deep sense of the cruelty and injustice of the treatment which Dr. Humphreys has received, and assures him of its sincere sympathy." This resolution was carried *nem. con.*

DEATH OF THOMAS FAIRBANK, M.D. LOND., M.R.C.S. ENG.

The profession will learn with much regret that Dr. Thomas Fairbank, of Windsor, died suddenly on February 26, aged only thirty-seven. While driving in Windsor-park, Dr. Fairbank was seized with an apoplectic fit. He was removed to the nearest lodge, and a messenger was sent to Windsor to obtain the services of Dr. Ellison. But though Dr. Fairbank rallied a little in the afternoon, he sank again, and died the same evening. He obtained his medical education at St. Bartholomew's Hospital and in Berlin, and was a highly intelligent and hard-working student. He was an M.D. of the University of London, and obtained Gold Medals in Medicine and Forensic Medicine; and he became a Member of the College of Surgeons of England in 1864. Settling in practice in Windsor, he had rapidly obtained an enviable degree of success, and was Surgeon to her Majesty the Queen and the Royal Family and Household, and to their Royal Highnesses the Prince and Princess Christian and their household. He was also Surgeon to the Windsor Royal Infirmary; and had contributed articles to our pages and those of other medical journals.

TESTIMONIAL TO DR. FARR.

So many of Dr. Farr's friends and admirers have expressed a wish to mark his retirement by some substantial mark of their appreciation of the value of his forty-two years' labour in the interest of public health and statistical science, that a committee is now being formed for the purpose of raising a testimonial fund to be presented to him. It is especially intended by the promoters of this project that the presentation shall simply be a personal tribute in recognition of the public appreciation of the long and exceptionally valuable services of Dr. Farr. The names below constitute a preliminary list of the proposed committee, to which other names will be added so soon as the consent of those to whom application has been made shall have been received. Communications on the subject, and offers of co-operation in promoting the object in view, can be forwarded to Mr. Noel A. Humphreys, of the Registrar-General's Office, Somerset House, who is temporarily acting as Honorary Secretary. *Preliminary List of Committee:* The Earl of Derby; the Earl of Shaftesbury; Earl Fortescue; Sir John Lubbock, Bart., M.P.; Sir Brydges Henniker, Bart., Registrar-General; Sir Thomas Watson, Bart., M.D., F.R.S.; Sir James Paget, Bart., F.R.S.; Sir William Gull, Bart., M.D., F.R.S.; Sir George Burrows, Bart, M.D., F.R.S.; Sir Joseph Fayrer, K.C.S.I., F.R.S., President of the Epidemiological Society; Major Graham, late Registrar-General; Dr. Acland, F.R.S., President of the General Medical Council; Dr. Risdon Bennett, President of the College of Physicians; Mr. Luther Holden, President of the College of Surgeons; Mr. Erichsen, F.R.S., President of the Royal Medical and Chirurgical Society; Mr. A. H. Bailey, President of the Institute of Actuaries; Mr. G. W. Hastings, President of the Council of the Social Science Association; Mr. John Simon, C.B., F.R.S., late Medical Officer to the Privy Council; Mr. Robert Rawlinson, C.B., Chief Sanitary Inspector of the Local Government Board; Dr. James Wakley, Acacia Park, Long Cross, Chertsey; Mr. Ernest Hart, Chairman of the Parliamentary Bills Committee of the British Medical Association; Mr. William Newmarch, F.R.S., 67, Lombard-street, E.C.; Mr. Thomas Wakley, Redcliffe-gardens, South Kensington; Mr. R. B. Martin, 68, Lombard-street (Honorary Treasurer).

NINTH CONGRESS OF THE GERMAN SURGICAL SOCIETY.

This congress will meet at Berlin from April 7 to 10 next; President Baron von Langenbeck. The meetings for scientific discussion will take place on April 7 from half-past twelve to four, on the other days from two to four p.m., in the hall of the University. The demonstrations of patients, preparations, etc., will be held from ten to one in the University Clinic and at the Charité Hospital. On April 8 there will be a public dinner at the Hôtel du Nord. All communications are to be addressed to 3, Roonstrasse, Berlin, N.W.

THE LOWER THAMES VALLEY DRAINAGE INQUIRY.

The inquiry into the scheme proposed by the Joint Drainage Board for the drainage of the Lower Thames Valley has been continued, and several witnesses have been examined in support of the course sought to be adopted. Mr. Nelson, chairman of the Board, was under cross-examination for

over three hours, and gave a detailed history of the origin of the Board, and of its proceedings since its constitution in 1877. The next witness examined was Mr. Penrhyn, chairman of the Mortlake Local Board, one of the promoting bodies, who explained that Mortlake had made no less than eight different attempts to get itself properly drained, including two inquiries before the inspectors of the Local Government Board, and all these attempts had failed. He added that he looked upon the present scheme as much the best which had come before them. Mr. Richardson, chairman of the Surbiton Improvement Commissioners, and a member of the joint Board, gave a detailed account of the ineffectual attempts made by Surbiton to drain itself by means of nine or ten different schemes. He had always been a strong advocate of a combination scheme, such as the present. Out of the twenty-five plans sent in by the engineers, only one, that of Mr. Haywood, contemplated a resort to the proposed site. The most important information yet elicited was, however, tendered by Professor Ansted, who described in detail the character of the surface and subsoil of the proposed farm. It was situated, he said, on the sands of the Thames and the alluvium of the Mole. The soil varied, but it was all of a character through which water would pass with facility. Twenty-three borings had been made down to the London clay, which was reached at an average depth of nineteen feet; the results of the borings examined had afforded materials for the preparation of a geological chart, showing in detail the various strata, with their respective thicknesses. He was cross-examined with a view of showing that the exceptionally porous character of the soil might in itself be a source of danger to the Lambeth Water Company, who had statutory powers of pumping underground water from the land on the banks, as distinguished from the Thames bed. While he did not deny, he would not admit the germ theory of Dr. Franklin. It was, no doubt, a possibility, he admitted, that water from the site of the farm might reach the pumping station of the company a mile off, but he thought that in the interval any such water would be effectually purified. As to the effects of the scheme upon house property in the neighbourhood he would not undertake to speak; but of this he was convinced, that if an irrigation farm were allowed anywhere, the soil here afforded the most favourable conditions. Professor Ansted was subsequently recalled, and, in answer to the inspector, described, by reference to a large coloured geological map, the outfalls and characteristics of the principal rivers in and around the district, and indicated the course of a supposed subterraneous river distinct from the Mole somewhere in or near the valley of the Thames. He admitted that it was undoubtedly a fact that the rise and fall of the Thames influenced the wells upon both sides of the river. Professor Symons, Secretary of the Meteorological Society, was examined on behalf of the promoters, and gave evidence as to the amount of rainfall in the different parts of the gathering ground of the river Mole. Mr. Chalmers Morton, one of the Royal Commissioners on River Pollution, and author of the "Encyclopædia of Agriculture," was the last witness examined before the adjournment of the inquiry, and his evidence was to the effect that the land in question was admirably adapted for the purpose now in view. This gentleman's cross-examination stood over until the next meeting, which was fixed for the 5th instant.

DR. B. W. RICHARDSON ON HEALTH AND DRESS.

On Monday evening Dr. B. W. Richardson delivered a lecture to a large audience at the London Institution, on "Dress in relation to Health." It was, he said, altogether apart from his purpose to deprecate good fashion in dress. He thought every woman ought to make herself as becomingly beautiful as she could. Good health and good fashion would always go well together. Errors of fashion were due, as a rule, to the fact that fashions were dictated and carried out by vain and ignorant persons, who were skilled neither in art nor in the rules of health. Considering dress, first of all, in relation to its mechanical adaptation to the body, he objected to everything that led to unequal pressure and to tight bindings about the body, neck, feet, and limbs. Corsets, waistbands, garters, and tight shoes were specially denounced. The dress should be loose, and its weight borne by the shoulders. In the dress of men this was fairly accomplished, but the dress of women dragged from the waist, and occasioned physical bondage, which placed them at a great disadvantage as active workers. He condemned alike the corset and waist-belt worn by women, and the strap and belt used by boys when performing gymnastic feats. The belt interfered with free breathing, and tended to produce hernia. He suggested as a reform in the dress of women that it should be made similar in most respects to that of men. He would have mothers clothe their girls precisely as they clothed their boys, with the one distinguishing mark of a light, loose, flowing gown. He next discussed the quality of clothing, and the amount required at various seasons. Warm clothing ought to be put on in September or early in October, and not left off till the close of April. Heavy underclothing should be avoided. There was no necessary connexion between warmth and weight. He denounced black, and insisted that for all ordinary occasions light grey ought to take the place of black for the outer coverings of the body. Black was, in fact, of all colours the very worst, and those poor ladies who thought it necessary after bereavement to immerse themselves for months in crape were indeed to be pitied. After the suttee it was almost the saddest of miseries inflicted by society on the already miserable.

DEATHS OF FOREIGN SCIENTIFIC MEN.

The death is announced of the well-known German physician at Cairo, Dr. Reil-Bey; also of Mons. P. A. Favre, formerly Dean of the Paris Faculty of Science, at the age of sixty-seven. One of his earliest memoirs was devoted to a research on the chemical composition of the human sweat. His later calorimetric investigations in conjunction with Professor Silbermann are of more interest to the physicist than to the physician.

ALGIERS.

We should advise the enterprising proprietors of one or two of our morning journals, who have lately been investigating in a more or less biassed manner the sanitary condition of the North Mediterranean health-resorts, to turn the attention of their commissioners to Algiers. Visitors just returned from thence report on the best authority that diphtheria and typhoid fever have been prevalent there this winter to an unusual extent—a fact which seems to indicate local defects of drainage, these diseases not being usually epidemic at Algiers.

PATHOLOGICAL SOCIETY OF DUBLIN.

At the meeting of this Society held on Saturday, February 28 (the President, Professor E. H. Bennett, M.D., in the chair), Dr. W. Thomson showed a group of specimens from the body of a boy, aged ten years, who was driven over in the street, the wheel of a heavily laden hay-cart passing across the small of his back. He lived six or eight minutes after the accident. The last dorsal vertebra was observed to be very prominent; the abdominal cavity contained much blood, and an extensive hæmorrhage had evidently taken place towards the right meso-colon. The abdominal aorta

was completely severed. The right kidney was torn, and a portion of it was quite detached. There was complete dislocation of the spinal column. The spinous processes of the last dorsals of the first lumbar vertebræ were crushed—these vertebræ being entirely separated, and the spinal cord being cut or torn across. The President brought forward a case in illustration of the ulterior results of wound of the kidneys. On November 8, 1879, a woman, aged sixty years, fell with a ladder through a height of not more than six feet. Great collapse and irritability of the stomach ensued. There was an extremely oblique fracture of the lower end of the left femur. The left humerus was also broken close to the shoulder-joint. The right index-finger was smashed. Two days after the accident there was copious hæmorrhage from the bladder. On November 13 the pulse and temperature rose, and remained high, the thermometer marking 99° to 100° in the mornings and 101° to 102° in the evenings. Some symptoms of cystitis appeared, the urine being alkaline and purulent. Vague abdominal pain was complained of on both sides. On February 4 there were symptoms like those of ileus, which were supposed to be connected with perinephritic abscess. After death, much black pigment was found lying over the ileum, jejunum, etc. This deposit was probably due to the escape of blood effused at the time of the accident in November—it was, in fact, altered blood-pigment. There was no wound of the bladder. Some phosphatic calculi were found in the left ureter and kidney. An abscess of great size lay on the front of the left psoas muscle, and communicated with the hilus of the corresponding kidney. The right kidney and the liver were glued together by recent lymph. There was pyelitis, and some calculi lay free in the pelvis of this kidney.

DEATH OF EDWARD COPEMAN, M.D. ABER., F.R.C.P. LOND., F.R.C.S. ENG.

We regret to have to record the death of Dr. Edward Copeman, so well known as one of the leading physicians in Norwich and the county of Norfolk. Dr. Copeman died on February 25, aged seventy years. He had long held a very prominent position in Norwich; was for many years one of the Physicians to the Norfolk and Norwich Hospital, and at the time of his death was Consulting Physician to that charity. He was President of the British Medical Association when that body met in Norwich in 1874, and he was a frequent contributor to the medical journals. We shall hope to give an obituary notice of him shortly.

MEDICAL PARLIAMENTARY AFFAIRS.

Medical Service in India.—In the House of Commons, on Thursday, February 26, in reply to an inquiry by Dr. Playfair, the Secretary of State for War said that it had been decided to abolish the double system of medical administration on the staff in India, and from March 31, 1880, the British Medical Department and the Indian Medical Department will be understood as one department for the medical administration of the army in the three presidencies; the Surgeon-General at headquarters in each presidency being always an officer of the British Army Medical Department. This change will necessitate the retirement of six Deputy Surgeons-General of India, as they will be in excess of the requirements according to the new regulations, and the Government of India offers to each a retiring allowance with an extra pension and a step in rank.

Army Estimates.—In the House of Commons on Monday, March 1, the House having resolved itself into Committee, Colonel Stanley rose to move the different votes for the Army Estimates. On Vote 4, for £308,400 to provide for medical establishments and service, Colonel Stanley said that since the Committee had been engaged upon the consideration of this subject the Medical Warrant had been issued, and he believed there existed a great concurrence of opinion in favour of this Warrant. It had been successful in attracting candidates of a better class than those who had been brought into the Army for many years past, and inducing them to come forward in much greater numbers. There had been two examinations of candidates since December last, when the Warrant was issued, and at these two examinations 118 competitors presented themselves, of whom 107 were successful. Both in South Africa and in Afghanistan the generals in command had spoken in the highest terms of the efficiency, zeal, and self-devotion of all ranks of officers, and he was afraid that in this respect there was even melancholy evidence in the large numbers who had succumbed to hard work, especially among the Indian forces. He referred to the loss which the medical service and the medical world in general had sustained by the death at Sherpur of Deputy Surgeon-General Porter, an officer whose arrangements for all the medical duties of the campaign left nothing to be desired. He left, both among the medical world and his countrymen, a reputation to which his friends might look back with satisfaction, and a memory which will be dear to all who knew him. In the recent attack on Secocoeni's camp, the ambulances were for the first time fully organised, and it was satisfactory to know that this was attended by the best results, under the direction of Surgeon-Major Hector. Colonel Brackenbury, describing the advantages of the establishment of this column, said:—"It was a sight to see, for I suppose it was the first action fought by our troops in which it can be said that not a single fighting man left the ranks to move the wounded to the rear. It was a trial, though on a small scale, and I am satisfied that the system is sound. Hector, I hope, will receive the appreciation he deserves." The more official report of the principal medical officer states that so efficiently and rapidly did the corps perform its duties that no wounded man was left two minutes on the ground before he was taken to the dressing-station. Subject to certain conditions, exchanges were now as absolutely free as in the combatant branch. The only exception was that when a medical officer returns invalided from such a climate as India, he is prevented from going into a similar climate. Then there has been the concession of forage to surgeons. The granting of forage has been treated by almost all of them as a genuine and welcome concession. We have also introduced a system, when there is not work enough to employ an army medical officer, to engage the services of others at a lower rate of pay. Twenty-one medical officers on half-pay and six Militia medical officers have been appointed to these stationary posts.

Vaccination.—Mr. Sclater-Booth, in reply to Mr. Gourley, said that he had caused the returns of the vaccination officers of the Durham Union for 1878-79 to be examined, and found that they contain no information as to deaths being caused by vaccination. What they do contain are statements in separate columns, showing in the one the total number of births, in the other the number of children who have died before vaccination. As the numbers thus given correspond very closely with the figures stated in the question, he was driven to the conclusion that "the excessive mortality" shown is the mortality of children who died without being vaccinated at all. Being unaware of any deaths having occurred from vaccination, it is impossible to adopt steps to prevent them.

Tea Analysis.—On Tuesday, Sir H. Selwyn-Ibbetson, replying to Mr. Verner, said: It is not quite correct to say that there is an appeal from the verdict of public analysts to the laboratory at Somerset House. What the Act of 1875 says is, that upon the request of either party in a case, the justices, or court of appeal, may in their discretion cause any article of food to be sent to the Commissioners of Inland Revenue for analysis. The object of this clause is to provide the means of obtaining an independent scientific opinion, rather than to give an appeal against the decisions of public analysts. It gives no absolute right of appeal. In respect of tea, the Act puts the Commissioners of Customs in the position of a court of law. Their discretion is absolute and final, and this arrangement appears to work satisfactorily.

The Water-Supply of London.—Mr. Cross, in introducing this Bill, said that in August last they had a discussion about the water-supply of London on the motion of the hon. member for Hackney; and he gave notice that the whole question would be taken into consideration by the Government during the recess. The result of the investigation on behalf of the Government was the production of this Bill. After all the

inquiry that had been made, and after the best advice he could obtain, he was certainly convinced that there was only one remedy for the existing state of things, and that remedy was the unification of all the existing companies. There were eight companies at present supplying what was generally called the metropolitan area—five north and three south of the Thames. There was no natural boundary to any one of these companies. By means of unification a great reduction of expense would be effected. In the present session the Southwark and Vauxhall Company proposed to carry out new works to the amount of £500,000, which would be useless if this Bill became law. Then there were the proposed new works of the Grand Junction and the West Middlesex Companies; and if the companies existed, other new works and extensions would be carried on for a long series of years. A point of much importance was that it would be possible to make a division of London according to the levels by having the proper pressure at different heights in various parts of the town. If anyone were to look at a map showing the different sources from which the companies drew their supplies of water, he would be amazed at the waste there was of power. He did not think unification could be obtained by any arrangement among the companies themselves. If each metropolitan borough were to supply itself with water there would be, if possible, greater confusion than existed at present. The Government had come to the conclusion that the best way of arriving at a satisfactory solution was that the existing companies should surrender the powers they possessed under their several Acts of Parliament to some central body which should have absolute power over the supply of water to London. We might take over the companies by compulsion or by agreement. Parliament had willingly conferred powers on these companies. On the faith of the powers vested in the companies vast amounts of capital had been subscribed by a large number of individuals, and Parliament could hardly step in now and say, "We will take this away from you, and we will pay you something like compensation by arbitration." He was certain that any attempt at compulsion would provoke the most violent opposition from every one of the companies. A Bill might be brought in providing for the purchase of the companies at a subsequent period, but that would leave us to all the danger and uncertainty of arbitration afterwards, and might find us let in for a much greater expense than was originally expected. When the Government first approached the companies and offered to take them by agreement, they were met in the first instance by refusal. In making an agreement with the companies, whatever the sum might be that had to be paid, the total extent of the liability was at once known, and there was nothing behind it when the price was once paid. The companies would hand over "all rents and other properties, including cash balances and investments, and all such property as may be in the possession of the companies at the time between January 1, 1880, and June 30, 1880," so that everything they possessed on January 1, and everything that might come into their possession during the next six months, would pass into the hands of the purchasers, except only the dividends payable to June 30; and, in the case of the New River Company, certain property in the county of Herts and elsewhere which had nothing to do with the water-supply of London. It would not be fair to other towns that any part of the money should be contributed from the imperial funds. They had persuaded the companies to consent to the Water Trust issuing a certain amount of Water Stock, the whole of which the companies would take by way of payment. It came then to this: that the companies would create the stock, and take it when created, and would thus themselves provide for their own extinction. The companies had agreed, through their directors, to take the whole of the purchase-money in the 3½ per cent. Water Stock. As far as the purchase was concerned, no money was required of anyone. That arrangement would avoid all disturbance of the money market. The stock to be issued would be charged first with all the water-rates, and then there would be the further guarantee of the rates of the metropolis and of the City of London. The next question was that of price. Putting the whole of the sums together they would amount to £31,000,000. As regards the composition of the Water Trust, he did not think that any corporation ought to be in the hands of the Government. He proposed that there should be three paid members of the Trust—viz., a chairman, who would receive £2000 a year, and two vice-chairmen at salaries of £1800. The first chairman and vice-chairmen would be appointed by the Government. After the first appointments the election of the chairman and two vice-chairmen would be left to the Trust. As to the members of the board, he proposed that in addition to the three salaried members there should be two *ex-officio* members, one nominated by the Local Government Board, one by the Chief Commissioner of Works, and two others nominated by the Commissioners of Sewers, and one by the Metropolitan Board of Works. The Lord Mayor and the Chairman of the Metropolitan Board of Works would also be *ex-officio* members. They proposed that there should be twelve elected members. He did not think they would approve of an election by the vestries. The question was, who were to elect? He thought the simplest plan was that one member should be elected by each of the metropolitan boroughs. The water consumers of the metropolis would in this way be directly represented. But there was a large population outside the metropolitan area which were large water-consumers, and it was thought right that they should be directly represented. Accordingly it was proposed that one representative should be sent by the inhabitants north of the Thames but outside the metropolitan area, and one from the corresponding population on the south side of the river. The elected members were to hold their seats for five years; the nominated members were to hold theirs at the pleasure of those who nominated them. The main objects of the Trust he might define as follows:—The supply of pure and wholesome water for drinking and other domestic purposes, for watering the streets, for extinguishing fires, and for manufacturing purposes, and the maintenance as far as possible of a constant supply. The price of the water would be reduced as circumstances permitted. As the Trust would not come into operation the moment the Bill was passed, provision was also made that the companies should carry on the business till October 1, when they would finally become extinct. Lastly it was provided that there should be a sinking fund for the extinction of debt. He should ask that the Bill be referred to a hybrid committee. Leave was given to bring in the Bill, which was read a first time.

The Health of St. Marylebone Parish for January last.—The monthly report of Dr. John Whitmore, the Medical Officer of Health for the Parish of St. Marylebone, for January last records a sustained high rate of mortality. The births during the month under notice were 544, and the deaths 418, the latter representing an annual death-rate equal to 27·23 per 1000 of the population of the parish. The high mortality was entirely due to the excessive number of deaths caused by bronchitis and other diseases prejudicially affected by a low temperature. From bronchitis alone 99 deaths were registered; of these, 26 occurred amongst infants and young children, and 44 amongst aged persons. Whooping-cough was the most fatal of the zymotic class of diseases; 30 deaths resulted from it, a very large proportion of which were consequent upon bronchitic complications, caused by undue exposure to cold, and the want of that necessary care so essential to recovery from this disease. Scarlet fever was fatal in 9 cases, measles in 1 only, and with regard to other diseases of the same class they were all much below the average. The mean temperature, like that of the preceding month, was unusually low; the mean daily temperature having been only 32°, whilst the mean of the night temperature was only 28°. During the month 52 deaths were registered at the workhouse, and 33 at the Middlesex Hospital; of these latter 8 were from cancer.

Discharge of the Pancreas at Stool.—At the Vienna Medical Society (*Allg. Wien. Med. Zeit.*, January 27) Privat-docent Dr. Chiari exhibited a fine "curiosity," in a pancreas that had been discharged per anum. The patient was thirty-eight years of age, and until four weeks before the occurrence had always been in good health. At that time he became ill, having all the symptoms of a most violent colic, with complete intestinal obstruction. The abdomen was enormously distended and very painful. The remarkable stool then followed, and the man rapidly recovered, and has since remained well. Dr. Chiari states that Rokitanski has described a similar case, and that the pancreas which was discharged is in the Vienna pathological museum.

THE INDIAN MEDICAL SERVICE.

G. G. O.

(Gazette of India, January 3.)

UNDER instructions from the Secretary of State for India, the Right Hon. the Governor-General in Council is pleased to direct the following changes in the organisation of the Medical Administrative Staff for the Army in India.

From March 31, 1880, the British Army Medical Department and the Indian Medical Department will form one department for the medical administration of the Army in the three Presidencies.

The establishment for the Bengal Army will consist of—

1 Surgeon-General, Army Medical Department;
1 Secretary to Surgeon-General, Army Medical Department;
1 Secretary to Surgeon-General, Indian Medical Department;
} at Head Quarters.

The statistical duties for the Army, British and Native, will be performed by the Statistical Officer attached to the Sanitary Commissioner with the Government of India.

The eleven circles of medical superintendence will be distributed as follows, each being held by a Deputy Surgeon-General:—

	Army Med. Dept.	Ind. Med. Dept.
1. Allahabad Division	1	—
2. Lahore Division ...	—	1
3. Meerut Division ...	1	—
4. Oudh Division ... / Rohilcund District	1	—
5. Rawal Pindi Division	1	—
6. Sirhind Division ...	1	—
	5	1

	Army Med. Dept.	Ind. Med. Dept.
7. East Frontier Dis.	—	1
8. Presidency Dist...	—	1
9. Gwalior Division / Saugor District	—	1
10. Peshawar District	1	—
11. Punjab Frontier Force...	—	1
	1	4

For the Madras Army—

1 Surgeon-General, Army Medical Department;
Secretary to Surgeon-General, Indian Medical Department.
} At Head Quarters.

The six circles of medical superintendence will be distributed as follows, each being held by a Deputy Surgeon-General.

	Army Med. Dept.	Indian Med. Dept.
1. Centre District... / Northern Dist...	1	—
2. Southern Dist... / M. & C. District	—	1
3. Mysore Division / Ceded District...	1	—
	2	1

	Army Med. Dept.	Indian Med. Dept.
4. Hy. Subsidiary Force ... ... / Hy. Contingent	—	1
5. Nagpore Force / Central I. Regts.	—	1
6. British B. Division	—	1
	—	3

For the Bombay Army—

1 Surgeon-General, Army Medical Department
1 Secretary to Surgeon-General, Indian Medical Department
} at Head Quarters.

The four circles of medical superintendence will be distributed as follows, each being held by a Deputy Surgeon-General:—

	Army Med. Dept.	Indian Med. Dept.
1. Presidency Dist... / Belgaum ... ... / Aden	—	1
2. Poona Division...	1	—
	1	1

	Army Med. Dept.	Indian Med. Dept.
3. Northern Division ... ... / Mhow Division	1	—
4. Sind District ...	—	1
	1	1

With the exceptions which are named below, all those officers will be relieved from any civil administrative duties they may have hitherto performed.

The Deputy Surgeons-General of the Eastern Frontier District and of the British Burmah Division will, in addition to their military duties, exercise the civil medical administration of their respective provinces, and will also perform the duties of Sanitary Commissioner in them.

The Deputy Surgeons-General of the Punjab Frontier Force and of the Sind District will exercise the civil medical administration of those provinces.

After making provision for the civil medical administration of the remaining provinces of British India, the establishment for which will be duly notified in the proper department, there will remain, below the rank of Surgeon-General, in excess of the establishment to be maintained for all duties—

Army Medical Department.

2 Deputy Surgeons-General.
3 Superintending Surgeons-Major.
2 Secretaries to Surgeons-General.
1 Statistical Officer to Surgeon-General.

Indian Medical Service.

6 Deputy Surgeons-General.

Orders have been already issued by her Majesty's Government for the withdrawal of the surplus administrative officers of the Army Medical Department.

With a view to provide for the retirement, on favourable terms, of the surplus officers of the Indian Medical Service, the Right Honourable the Governor-General in Council is pleased to offer to the Surgeons-General and the Deputy Surgeons-General of the three Armies their retirement on the extra pension of their grade, with an honorary step of rank, notwithstanding that they may not have completed the qualifying service of these pensions.

The number of retirements in each Army will be restricted to two.

The option of retirement will be given in order of seniority; but applications to retire, which must be made to the Military Department of the Government to which the officer belongs, cannot be accepted after March 1, 1880.

ANIMAL VACCINATION.(a)

THE grounds on which the demand for the introduction of heifer vaccination into the system of public vaccination of the country has been based are:—First, the assertion that the protection afforded by vaccination with humanised lymph has lessened in consequence of the deterioration of the vaccine by prolonged human transmission. This was an argument made use of by Dr. Cameron, M.P., in a letter that appeared in the *Times* newspaper. Had Dr. Cameron contented himself with merely saying that this was an opinion held by some distinguished observers, I should not disagree with him. But Dr. Cameron gave his own reasons for this belief, and those reasons deserve some consideration. One of his reasons is the high mortality that attended the last severe epidemic of small-pox. No doubt it was exceptionally high, but the cause of this was well known among epidemiologists. The epidemic which spread in this country in 1871-2 ravaged the whole of Europe, and everywhere presented a similar virulence; and its ferocious character was admittedly explicable from its mode of origin. It took its origin in Brittany among a population exceptionally ill-protected by vaccination, and, being there subjected to no modifying influence, it acquired a ferocity of nature which it carried with it to all the countries it invaded subsequently. This outbreak would probably not have been heard of beyond the isolated locality of its origin had it not been for the events of the Franco-German war. But at the time of the outbreak the circumstances of the French army made it necessary to drain the locality referred to of its youth. These brought the disease with them into the ranks of the army; the vaccination or re-vaccination of conscripts practised in ordinary times was, from the exigencies of the war, then neglected; the malady spread widely among the troops, and by them was disseminated among the populations wherever they went. Some carried this ferocious small-pox into Germany, and refugees from Paris brought it into England. At the period of introduction here the metropolis was at the beginning of an ordinary epidemic outbreak of small-pox depending upon the accumulation of unvaccinated children. But after the introduction of the malignant malady from France the unusual phenomenon was witnessed of the grave

(a) "Observations on Animal Vaccination, with Reference to Certain Recent Discussions and to the Attitude of the Government on the Subject." By Edward Ballard, M.D., F.R.C.P., of the Medical Department of the Local Government Board. (From the *Practitioner* for February.)

disease supplanting the less grave form, and finally reigning supreme.

The mortality statistics of this country, fairly dealt with, furnish no evidence that the protection afforded by vaccination with humanised lymph is fading. The first Vaccination Act was passed in 1840, and vaccination was made compulsory in 1853. In 1867 this Act was amended, and an organisation for its execution set on foot, which organisation was brought to its present condition of perfection in 1871. Looking to the small-pox death-rate during the period in which mortality has been registered, we see a progressive diminution of the small-pox death-rate, the only check to which occurred during the exceptionally ferocious epidemic of 1871-2. During the five years 1838-42 the mean annual death-rate per million of the population from small-pox was 571; during the three years 1847-9 (the causes of death from 1843 to 1846 were not abstracted at the General Register Office) it was 303; during the five years 1850-4 it was 274; during the five years 1855-9 it was 198; during the five years 1860-4 it was 190; during the five years 1865-9 it was 145; during the five years 1870-4 (which included the virulent epidemic already mentioned) it rose to 445—a number actually smaller than was observed during 1838-42; and during the four years 1875-8 it fell lower than ever, namely, to 97, notwithstanding a recrudescence of small-pox in 1877. (See Table appended.) Omitting epidemic seasons (during which children whose vaccination had been neglected necessarily fell victims to small-pox in exceptionally large numbers), the death-rate had been lessenihg among children under five years of age, which would scarcely have been the case if the protective character of their vaccination had been gradually lessening. Arguing thus from non-epidemic seasons alone, it may be stated that whereas between the years 1853 (when the first compulsory Vaccination Act was passed) and 1856 the mean annual death-rate per million under five years of age was 653, it fell between 1860 and 1870 to 419, and since the severe epidemic of 1871-2 it has further fallen (omitting the epidemic year of 1877) to 153. Even if the mortality of 1877 be included, the mean death-rate did not rise above 181. I admit that there were local deteriorations in the vaccine as cultivated by some vaccinators; but this arose from carelessness and neglect of the instructions under which they acted, and notably to the cultivation of the vaccine from pocks which were so hastened in their course as to present a considerable areola on the eighth day, and even some areola on the seventh day. The protection afforded by such vaccination could not be regarded as so good as that afforded by a vaccine which ran through its course more deliberately. And I feel bound to mention another source of defective protection. The Government gives rewards to public vaccinators whose work is such as to reach a certain high standard of excellence. Now, in my experience I have found in many places, where among an ignorant labouring population the public vaccinator vaccinated so as to reach this high standard, that there existed medical men who would not hesitate to seek favour with the mothers by vaccinating their children by a single insertion, assuring them that one pock afforded full protection against small-pox, and that the practice of the public vaccinator was inflicting an unnecessary amount of punishment upon the children. The production of a single pock is capable of being registered as a successful vaccination. I cry shame on such men, since they must be believed to know—as every tyro knows—the remarkable results of the late Mr. Marson's inquiry, years ago, with relation to this subject.

Dr. Cameron's remarks in the letter referred to upon the nature of the lymph which several years ago was distributed by Mr. Ceely and Mr. Badcock, and which was largely used and cultivated in the vaccination of children in all parts of the country, require brief notice. It was lymph originally obtained by the variolation of cows. I contend that it was not a spurious article, such as Dr. Cameron declares it to be, but that the pocks which furnished it were pocks of the true vaccine disease, in producing which the gentlemen mentioned had succeeded, notwithstanding that M. Chauveau and other experimenters had subsequently failed.

The second ground on which the advocacy of heifer vaccination has been based is the liability there is to the imparting of syphilis in the performance of arm-to-arm vaccination. I do not dispute that such a thing might happen—no one could do that in the face of facts within the cognisance of the profession—but I hold that the danger is infinitesimal. During my experience of several years as an Inspector of Public Vaccination, I have never seen or heard of such a thing as occurring; the only occurrence of the kind that I have seen was that which Mr. Hutchinson brought to the knowledge of the profession several years ago. Another ground of the demand has been that the use of heifer lymph would remove the scruples of parents, and so promote the completeness of the vaccination of the country. I contend, in opposition to this argument, that objection to arm-to-arm vaccination has had practically little to do with the incompleteness of infant vaccination. According to the last return only 4½ per cent. out of the infants born are unaccounted for as respects their vaccination, and I can from my experience state absolutely that this deficiency arose from altogether a different class of causes. It was the result of sheer carelessness or negligence. When the period for public vaccination came round, the mothers found it inconvenient to attend at the station: either it was washing day, or they had at the appointed hour to prepare the husband's dinner, or there was some other equally trivial excuse on which the attendance was put off from time to time, until a removal from the district put the children beyond the jurisdiction of the local officer.

Quitting this part of the subject, I would offer some observations on the position of the Government in this matter. They have no shortcomings to confess with relation to vaccination. So far from that, I claim for the department of the Government which is charged with the control of vaccination, not only public gratitude for the past,—gratitude for what it has done and also for what it has not done with reference to this question of heifer vaccination,—but also the full confidence of the public for the future. It holds constantly in mind in its arrangements with respect to vaccination the attainment of three objects, namely, completeness, efficiency, and safety; and I maintain that these objects have been practically attained. Possibly many may not be aware of the fact that the public vaccinators are provided with definite instructions as to the mode in which they are required to do their work; and I must say, for my own part, that I do not know how these could be improved upon. They are instructions, the observance of which, being essential to efficiency and safety, is actually enforced. Public vaccinators who obstinately neglect their observance are removed from their posts. Neither, whilst thus striving yearly to improve the national system of vaccination, has the Local Government Board been blind to the progress of events with respect to the practice of animal vaccination, or been negligent in its endeavour to ascertain the bearing of those events upon the needs of this country. The Board has been cognisant of the fact that animal lymph has from time to time been had recourse to by public vaccinators for the renovation of their supplies, and that when Dr. Blanc was vaccinating from calves in London, some years ago, Dr. Marson, then the chief vaccinator of the National Vaccine Establishment, renewed his stock at Surrey Chapel from one of Dr. Blanc's calves, and that this is the stock which has been cultivated there ever since. I recently saw a letter announcing that a public vaccinator in Wales had renewed his supply from a case of natural cow-pox, and on several occasions I myself have recommended public vaccinators, whose results were not to my satisfaction, to apply to Dr. Greene or to M. Warlomont for heifer lymph in order to start themselves afresh; and on no occasion has the Board given any indication of disapproval. The position the Local Government Board has occupied has been one of patient waiting and of inquiry. As long ago as 1869, Dr. Seaton, acting under the Board's instructions, investigated the practice of animal vaccination as it was then pursued on the Continent, and he reported in a sense unfavourable to its adoption into the public system here. The facts on which his opinion was based at that time are admitted to be correct. Last year (1878) he again visited the Continent with the same object, and the facts which he then succeeded in ascertaining, although they showed that improvements in the practice had taken place, yet were not such as to satisfy the Local Government Board that vaccination with heifer lymph was at all comparable with vaccination with humanised lymph in the certainty with which a complete and defined result was producible by its use. And this was

one of the first things to be satisfied about. On this occasion he visited Amsterdam, the Hague, Rotterdam, and Berlin, at the first of which places vaccination from the calf is performed by ten punctures, and at the last by six insertions. Measuring success by the proportion of vaccinated children in whom all the insertions were successful, or in whom they all failed, he found the results of vaccination with fresh calf lymph to be as follows:—(*a*) Complete success of all insertions, in children vaccinated: at Amsterdam and the Hague 34 per cent., at Rotterdam 54, and at Berlin 21. (*b*) Complete failure of all insertions, in children vaccinated: at Amsterdam and the Hague 2·2 per cent., at Rotterdam not stated, at Berlin 7·1. (*c*) Insertion success (calculated), that is to say, the number of vesicles produced per 1000 insertions: at Amsterdam and the Hague 700 or less, at Rotterdam not stated, at Berlin 678. With respect to the last-mentioned results, it is important to observe the close correspondence of the figures, in vaccination performed with this kind of lymph by equally experienced vaccinators, indicating that the results were not accidental merely. Compare with these results those obtained by Dr. Cory, the chief vaccinator of the National Vaccine Establishment, vaccinating with humanised lymph at Surrey Chapel. They are those obtained in the vaccination of the last thousand children vaccinated there with fresh lymph from the arm and by five scarifications; the results were registered by an observer who was not the vaccinator himself. (*a*) Complete success of all insertions, 97·8 per cent. of all the children vaccinated. (*b*) Complete failure of all insertions, 0·0. (*c*) Insertion success—*i.e.*, number of vesicles produced per 1000 insertions, 978. And it is again to be observed that the operators in each instance were among the best and most experienced operators, in the one case with animal, and in the other case with humanised lymph: the results were the best producible, then in each instance. Can it be wondered at that, with these figures before them, the Board should hesitate before adopting animal vaccination as part of the public vaccination arrangements in this country? The Board is invested with a serious responsibility, and, before it can move in the direction in which some desire that it should move, it must be satisfied that the use of heifer lymph would not compromise the completeness, efficiency, and safety which now characterise the vaccination arrangements which have been established. The Board has inquired, and has repeated its inquiries, and it is at the present moment prosecuting the inquiry, having charged Dr. Klein with an investigation into the affinities of small-pox and cow-pox, an important preliminary to any change in the face of the discrepancy of results obtained by our native and by continental experimenters in the variolation of the cow. The Government is actively seeking information; and when the scientific question shall have been satisfactorily solved, various administrative difficulties will have to be considered. But the Bill which Dr. Cameron proposes to introduce into Parliament is intended to force the Local Government Board into the immediate adoption of animal vaccination—to force it to act prematurely and before it is prepared to act. I am authorised distinctly to say that the Board regard the optional clause of Dr. Cameron's Bill—the clause which proposes to give parents the option of human or animal lymph for use in vaccination of their children at public stations—as quite inapplicable to the circumstances of our population at large; at the same time the Board have no objection to raise to any person, who wishes for vaccination from the animal, obtaining it from a private practitioner. Animal lymph is readily obtainable, being an object of sale in London. The Local Government Board desire earnestly to do the best they can for the protection of the public against the scourge of small-pox; and if the inquiries of the Board should show in the end that animal vaccination is the best thing, that administrative difficulties which now appear serious can be cleared away, and that by its adoption into our national system greater completeness with greater efficiency and safety can be insured, then it may be taken as certain that what the Board is satisfied will be most conducive to the public welfare is the thing which will be done.

I would add some remarks regarding the late Medical Officer of the Local Government Board, Dr. Seaton, who has virtually been charged with bigotry in his relation to this question. Dr. Seaton was a man of thorough honesty of purpose and honesty in research; but he was loaded, as the medical adviser of the Board, with serious responsibilities, and he was bound to exercise caution, especially following as he did Mr. Simon, whose administrative caution was exemplary. It was when Mr. Simon was the chief of the Medical Department that Dr. Seaton made his first inquiries on the Continent. When Dr. Seaton himself became the Medical Officer of the Board, he spontaneously undertook a second inquiry himself; it was he who initiated Dr. Klein's investigations; and, had it not been for the unfortunate circumstance of his ill-health, there could not be a doubt that more would have been done during the last three years in the prosecution of the inquiries which interested him so much.

ENGLAND AND WALES.—SMALL-POX MORTALITY.

Year.	Deaths from all causes.	Deaths from small-pox.	Death-rate from small-pox to 1,000,000 living.		
1838	342,760	16,268	1,064		
1839	338,984	9,131	589		
1840	359,687	10,434	663	571	The annual rate of mortality in England and Wales from small-pox averaged 420 per 1,000,000 living in the twelve years 1838-42 and 1847-53.
1841	343,847	6,338	400		
1842	349,519	2,715	168		
1843	346,445	Causes of death in England and Wales during the four years 1843-46 have not been abstracted.			
1844	356,933				
1845	349,366				
1846	390,315				
1847	423,304	4,227	246		
1848	399,833	6,903	398	303	
1849	440,839	4,644	264		
1850	368,995	4,665	263		
1851	395,396	6,997	396		
1852	407,135	7,320	409		
				274	
Compulsory Vaccination—					
1853	421,097	3,151	174		
1854	437,905	2,808	153		
1855	425,703	2,525	136		
1856	390,506	2,277	121		
1857	419,815	3,936	206	198	
1858	449,656	6,460	335		
1859	440,781	3,848	197		
1860	422,721	2,749	140		
1861	435,114	1,320	66		
1862	436,566	1,628	81	190	
1863	473,837	5,964	293		
1864	495,531	7,684	373		
1865	490,909	6,411	309		
1866	500,689	3,029	144		
				145	
V. A. Amended—					
1867	471,073	2,513	118		
1868	480,622	2,052	96		
1869	494,828	1,565	72		
1870	515,329	2,620	118		
Arrangement Perfected—					
1871	514,879	23,126	1,024	445	The annual rate of mortality from small-pox in England and Wales averaged 216 per 1,000,000 living during the twenty five years 1854-78.
1872	492,265	19,094	833		
1873	492,520	2,364	102		
1874	526,632	2,162	92		
1875	546,453	950	40		
1876	510,315	2,408	100	97	
1877	500,496	4,278	175		
1878	539,872	1,856	75		

Memo.—In the first three quarters of 1879 only 486 deaths from small-pox were registered in England and Wales, of which 443 occurred in London, and in its outer ring of suburban districts.

ON THE THERAPEUTICS OF ACUTE RHEUMATISM.(a)

FIRST of all, gentlemen, I cannot too strongly insist on this fundamental fact, that no single remedy can be rightly applied to every case of acute rheumatism. In this disease, notwithstanding it pursues a pretty uniform plan, there are wide differences in origin, in the type of individual cases, and in the constitutional state and bodily condition of patients—all of which must have due recognition if we would employ our therapeutical expedients wisely. Let me illustrate: Rheumatism seems sometimes to be of distinctly nervous origin. We now know that certain changes in the spinal cord, and injuries of nerves, are followed by joint-inflammations similar to those of acute rheumatism. Again, the circulation of some organic acid in the blood has seemed to

(a) From a Clinical Lecture delivered at the Jefferson College Hospital by Roberts Bartholow, M.D., Professor of Therapeutics and Materia Medica in Jefferson Medical College, Philadelphia. (From the *Baltimore Practitioner*, January.)

excite rheumatic inflammation; at least, we know that the sweat and the urine are very acid, that endocarditis has been excited by injecting lactic acid into the peritoneal cavity of animals, and that rheumatic attacks have been induced by he administration of lactic acid for diabetes.

Furthermore, the most superficial inspection of the cases which have been shown must have satisfied you that there are three classes of subjects who are attacked by rheumatism: the cachectic, feeble, and nervous; the obese, florid, but flabby, drinkers of malt liquors; the vigorous and able-bodied, who have inherited or acquired a rheumatismal diathesis.

These forms and types are so distinct that he who fails to take heed of them cannot properly adapt his means to the end in view, and must pursue merely routine methods.

Taking up for consideration, first, the type of feeble, anæmic, uervous subject—what method shall we pursue? If I were governed merely by the fashion of the time I would direct salicylic acid or salicin—an undeniably efficient remedy in many cases. But in this class of subjects it does not succeed well; they are much depressed by it, and have a tedious convalescence with a strong tendency to relapses. In these cases I decidedly prefer the tincture of the chloride of iron, in half-drachm doses, well diluted with water. We owe chiefly to Dr. Russell Reynolds the important fact that the tincture of iron is an efficient remedy in acute rheumatism. It cuts short the duration of the disease, and, what is even more important, lessens the danger of cardiac complications. Dr. Anstie pointed out another fact—that the tincture of iron has the power of prophylaxis, of preventing attacks that are impending. Whether it acts by virtue of its acid or its iron is not known, but it is probably the former.

I direct, as I have already indicated, and as you have witnessed, thirty minims of the tincture well diluted with water, every four hours. The affected joints are wrapped in cotton if the patient desires it, but otherwise are simply kept at rest, and if the pain is severe, some small blisters are applied around the joint, but not on it. I have treated many cases with the iron alone, and with iron aided by moderate doses of alkalies and blisters. The best results have been obtained in these weak and anæmic subjects by the iron and blisters, and an occasional laxative of Rochelle salt. The treatment by blisters alone is a highly efficient plan, and is by no means so painful and disagreeable as it appears at first sight. The blisters remarkably relieve the pain, and patients soon learn this and ask for their repetition. But the blisters do more; they bring about a more alkaline condition of the blood, and render the urine less acid, or bring it to neutral, or even to alkaline. I do not, as the French physician (Dr. Dechilly) who proposed the method, apply large blisters over the whole of the affected joints, but as Dr. Davies, of the London Hospital, who introduced the method into England, apply smaller blisters to encompass the joints. To be more explicit: I have small blisters, the size of a silver dollar, placed around the joint, leaving an interval between for succeeding applications.

In these weak subjects a few blisters are applied, and the joint is supported at rest, but the tincture of iron is the chief remedy. Managed in this way the duration of the cases rarely exceeds two weeks; heart-complications are infrequent, and the patient's strength is conserved so that convalescence is rapid and relapses uncommon.

The cases of the second class require different management. They are the fat and flabby subjects, often excessive consumers of malt liquors, who suffer habitually with acid indigestion and the usual concomitants of this state. Such subjects present a delusive appearance of good health, but they have a weak circulation, are easily put out of breath, tire on the least exertion, and often suffer from lumbago, myalgia, and other so-called rheumatic troubles. When attacked with acute rheumatism, they are very apt to have endo- or exo-cardial complications. These cases are most successfully treated by the alkaline plan. In, I believe, almost the last paper written by the late Dr. Fuller, which was in opposition to Drs. Gull and Sutton's "mint-water treatment," he insisted strongly on certain points in regard to the use of alkalies, inattention to which had been the cause of failure in the treatment. He says we must give not less than an ounce and a half of the alkaline carbonates, either alone or in combination with a vegetable acid, during the first twenty-four hours of the treatment. This may be prescribed as a drink—a lemonade—by adding lemon-juice or citric acid to the solution of the carbonates: two drachms of the carbonates, an ounce of lemon-juice, or half a drachm of citric acid, dissolved in four ounces of water, and taken every three or four hours. If the bowels are constipated, he gives compound cathartic pills at bed-time. As soon as the urine, when passed, ceases to exhibit an acid reaction, he reduces the alkali one-half. This reduction of the daily quantity of alkali goes on each day, until the fourth or fifth day, when, if the urine continues to be alkaline, he prescribes bark preparations or quinia, at the same time continuing the alkalies in moderate quantity. If treated on this plan, the class of cases under consideration get well within two weeks, and are often up in a week. Instead of giving the quinia in the small doses of three grains advised by Dr. Fuller, the results are much better if twice that quantity is given every four hours. In these cases, instead of quinia I usually give, after the alkali course, the tincture of iron; and, if the attack is a severe one, apply blisters about the principal joints.

(*To be continued.*)

FROM ABROAD.

The Banquet to Professor Broca.

It is gratifying to observe that the banquet given to Prof. Broca on the occasion of his election into the Senate was not a political demonstration, a great number of the more than two hundred guests present holding very different political opinions to those which gained him his election. All, however, were free to testify to the pleasure they felt at a man of such distinguished scientific attainments and position having been selected. "In celebrating my election," he observed in reply to the toast, "you have especially wished to bestow on me a personal testimony, but I think you have also wished, putting my person aside, to applaud the nature of the choice the Senate has made. It is evident that those who have elected me would not have thought of me if they were not aware of my entire devotion to republican institutions; but if among so many men not less sure, and of far more authority than I am in political questions, they have chosen a man of science, that is because they hold science in high consideration, and believe that in serving science they are also serving their country. I feel penetrated with gratitude, and I am certain that you partake this sentiment. I ought also to express my gratitude to all those who have encouraged my labours, to the medical body which has sustained me in my career, the masters who have taught me, the scientific press which accepted and diffused my publications, the Faculty of Medicine which gave me my chair, the Academy of Medicine which admitted me into its body, and this dear Society of Anthropology which has given me so precious a testimony of its esteem and friendship. I have divided my entire life between Medicine and Anthropology, and both have loaded me with favours. Medicine has led me step by step to a position which she reserves for the most fortunate; and Anthropology has now added another success, for, possessing the privilege of interesting all cultivated intellects, it has made my name known beyond the scientific medium, and has attracted to me the attention of politicians. Most ungrateful should I be if I did not remain faithful to sciences to which I owe so high a recompense, and I should not be less unfortunate, for no satisfaction can equal that derived from work and the search after truth."

The assemblage was indeed a most gratifying one. Presided over by the celebrated historian Henri Martin—who, an attached friend of Prof. Broca, has of late devoted himself to prehistoric studies,—and having very few deputies present, it was crowded with scientific celebrities from the Institute, the Academy of Medicine, the Faculty, the hospitals; and the Anthropological Society attended almost *en masse*.

In noticing Prof. Broca's industrious career, a writer in the *Union Médicale* (February 24) observes that few men have been more fortunate. The son of a country practitioner, who died quite recently, his hospital progress was one continued triumph, succeeding in *concours* after *concours*. He felt his power early, and, courage, determination, and hard work aiding, he has rapidly advanced to his present high

position. Early in life, also, he married the daughter of Dr. Lugol, of the St. Louis, who brought him a large fortune. With his taste for hard study, and so fortunately placed in the world, it is not surprising that he has never sought practice; but it is remarkable that he desired and obtained a clinical chair in the Faculty, such a post being the usual avenue to a large consultation and operating practice. He is perhaps the only clinical professor who has not reached a high position as a practitioner. He evidently did not desire this. The study which has entirely absorbed him is that of anthropology. He was the founder of the Paris Anthropological Society, and the originator of the Ecole d'Anthropologie, in which every branch of the science is taught by professors whom he has chosen.

Benefits of Suppuration.

From an address delivered by Prof. Gunn, of Chicago, the *Louisville Med. News* (February 7) quotes the following passages:—"At the risk of inviting an imputation of old-fogeyism, I claim for suppuration, under certain circumstances, beneficent influences. In old pathology, suppuration was one of the usual terminations of inflammation, and the amelioration of the violent symptoms in local inflammations which followed upon the establishment of that process led to the practice, still in some measure followed, of promoting and encouraging the suppurative process. . . . . Who of the older surgeons does not remember the beneficial effects which followed almost surely the introduction of a seton into, or in the neighbourhood of, diffuse chronic cacoplastic inflammation? . . . . It was my experience many years since, in a case where union by first intention followed an extirpation of the mammary gland, to note an almost immediate return of the disease in the cicatrix. The skin was entirely healthy at the time of the operation, and yet, in a union by first intention, hardly had the linear cicatrix formed before it began to swell and harden by recurrent infiltration. Similar, though less pronounced, subsequent experience—in marked contrast with the soft, pliant, and healthy cicatrix which usually followed extirpations when, from the extensive loss of integument, the healing was by granulation accompanied by suppuration—led into a train of thought like the following: Malignant growths, whatever general cause may be behind, are accomplished by a perverted and luxuriant local nutrition, in which cells of an atypical character are formed. In such locality this production of atypical cells becomes, so to speak, a *habit* of nutrition, which, after extirpation of the diseased mass, is liable to be perpetuated. If, however, we can interrupt this habit, and establish a form of cell-production in which typical cells are constructed, we may possibly do much to prevent an early return of the heteroplasm in the original site. This would be accomplished by establishing healthy suppuration, in which the typical cell is produced. The local habit of nutrition being now the building of typical forms, the danger of an early recurrence of the disease in this locality is greatly diminished. Acting upon this theory, I have for a number of years been in the habit of leaving from one-fourth to one-third of the wound unclosed after extirpation of malignant growths, except in cases where deformity would result. Into this unclosed portion of the wound lint has been introduced, and warm-water dressings have been applied till suppuration has been fully established. This process has been maintained by resin-cerate dressings until healing has become complete. The cicatrices have been uniformly soft and pliant, and an early return of the disease in its original site has seemed to have been largely prevented."

Society of Medical Officers of Health.—At a meeting held on the 20th ult. the following resolution was passed, copies of which have been sent to Lord Beaconsfield and to Dr. Farr:—"The Society of Medical Officers of Health desires to record its high appreciation of the scientific qualifications of Dr. Farr, and of his long and valuable services in the department of the Registrar-General; and is of opinion that his able deductions and statistical work have contributed in an eminent degree to the advancement of sanitary science, and entitle him to some special mark of honour and approval. The Society also desires to express its gratitude to Dr. Farr for his invariable courtesy to all medical officers of health."

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Annual Meeting, Monday, March 1.

John E. Erichsen, F.R.C.S., F.R.S., President, in the Chair.

The President, on taking the chair, declared the ballot open for officers and council for the next year, and nominated Dr. Poore and Mr. R. W. Parker as scrutineers.

The Hon. Secretary, Mr. Timothy Holmes, then read the report of the President and Council. It was a favourable one as to the increase in the number of Fellows. The deaths had been 17, and consisted of 10 resident and 7 non-resident; the former including many important workers in the Society whose faces had long been familiar at its meetings. The new Fellows elected were 32 (considerably above the average), and of these 26 were resident and 6 non-resident. After some further statements relative to changes among the Fellows, the report gave the total number, resident and non-resident, as having increased in the year from 666 to 679. The receipts of the year for subscription and admission fees exceeded those of last year by about £130, and the ordinary expenditure was slightly above the average of the last last three years. The extraordinary expenditure on the printing of the catalogue and index had been £614 7s., which had been met by the sale of funded property to the amount of £500, the sale of the catalogues to the amount of £60, and the payment of the balance out of the year's income. The reports of the Scientific Committees on Membranous Croup and Diphtheria, and on Suspended Animation, had both been read and discussed at meetings during the past year. The report referred to the question of the contribution of fifty guineas to the Harvey Memorial Fund, which, agreed to at the last annual meeting, was again to be submitted to the general meeting by the Council, owing to their having received counsel's opinion adverse to the legality of the grant. The report relative to the library stated, as usual, the number of additions during the year, the triennial inspection of the books, the completion of the library copies of the new catalogue and index, with the shelf references, etc., and gave a continuation of the statistics (now for a long period drawn up every third year) of the number of books and volumes in the library, number of books lent out and used in the library, and the number of visits of Fellows to the library.

The adoption of the report was moved by Dr. Greenhow, seconded by Mr. R. W. Parker, and carried.

The President remarked that now was the proper time to discuss any matter relating to the business affairs of the Society, and referred to the question which had been raised as to the legality of the vote of fifty guineas to the Harvey Memorial.

Dr. Wilson Fox suggested that the meeting would be glad to hear something of the views of the Council with regard to the subject.

The President said that there was very little to add to what was before the Society. After the vote had been made Mr. Moncrieff Arnott had made it known that he was not satisfied as to its legality, and had taken counsel's opinion on the subject. Thereupon the Council had taken the opinion of the standing counsel of the College of Surgeons, who also confirmed the view of the illegality of the vote. Since that time a well-known Fellow of the Society had taken other counsel's opinion, which was favourable to the vote, and thus they were situated.

Dr. John Harley said that under the circumstances there seemed to be nothing left to the Society but to rescind the vote, and he moved accordingly. It was clear that the counsel which the Society had consulted was against the vote, and they ought to abide by his opinion.

Dr. Greenhow seconded the motion. Much, he said, depended on the drafting of the case, as, stated in a certain way, they could get any opinion desired; and they ought to abide by the views of their own counsel. Harvey needed no such memorial.

Dr. Quain said that this was not a question merely of a

memorial to Harvey, but whether the hands of the Society were so tied that they could not devote a farthing of their funds to any object except to medicine and surgery. He had taken the opinion of counsel the most eminent he could obtain—that of Mr. Chitty,—and it was founded entirely on the charter of the Society. The case as stated was a model of simplicity, and the opinion was equally to the point. This was entirely in favour of allowing the Society so to dispose of its own funds.

Mr. Cooper Forster said the treasurers, of whom he was one, were only the servants of the Society; but when the advice taken by the Society was against paying out the money, it must cause them to reflect. It was possible, under the circumstances, that the treasurers might have to pay the sum out of their own pockets, and that the Society might be involved in litigation.

Dr. John Harley held that this was a breach of confidence as regarded the Fellows of the Society, and that the precedent would be most injurious.

Mr. Birkett said that at the last meeting, when this subject was under discussion, he had said nothing, being then treasurer. He would now say that he had opposed the vote from the beginning, as opening up new and undesirable precedents. Nothing of the kind had been done before.

After remarks from Dr. Symes Thompson, Dr. J. Harley, and Surgeon-General Balfour,

Dr. West proceeded to say that, though they ought to be bound by the opinions of their standing counsel, yet in the end they might regret it. As to the precedent, that was not likely to be of much force. They were not likely to have another Harvey. A small subscription would not have the same force or value.

Mr. Holmes suggested that it might be a good plan to start a voluntary subscription on the part of the Fellows—no individual names being given, but the whole to be presented in the name of the Society.

Dr. West insisted that this would not be the same thing as a donation from the funds of the Society.

Dr. Pavy said that, while it was a pity to be so bound down, the proper plan would be for the opposing parties to move for a revisal of the charter.

Finally, the motion of Dr. J. Harley—that the vote of fifty guineas in aid of the Harvey Memorial Fund be rescinded—was put from the chair, when twenty-two voted for and twenty-four against it.

The President then addressed the meeting. After alluding to the generally prosperous condition of the Society, the valuable volume of *Transactions* for the previous session, and the completion of the new catalogue and subject-index of the Society's extensive and important library, he gave obituary notices of the seventeen Fellows who have died since the last anniversary meetings. They comprised, among the resident Fellows, the names of Charles Murchison, M.D.; Charles Brooke, F.R.S.; Tilbury Fox, M.D.; Patrick Black, M.D.; George W. Callender, F.R.S.; Arthur Leared, M.D.; J. Soelberg Wells, F.R.C.S.; Duncan M. Maclure, M.B.; Henry Hancock, F.R.C.S.; and Edward Cator Seaton, M.D.: and among the non-residents, those of Jesse Leach, F.R.C.S. (Heywood); Wm. Reeves, M.D. (Carlisle); Samuel Wood, F.R.C.S. (Shrewsbury); Frederick Collins, M.D. (Wanstead); Richard Francis George, M.R.C.S. (Bath); Thomas Cutler, M.D. (Spa, Belgium); and Alfred Keyser, F.R.C.S. (Berkhampstead).

A vote of thanks to the President was moved by Sir H. Thompson, seconded by Dr. Cholmeley, and carried with applause; also to the retiring Vice-President, Dr. Quain, and other retiring members of Council, by Dr. Douglas Powell; and to the retiring Hon. Secretary, Dr. James Andrew, by Dr. Symes Thompson, seconded by Dr. John Harley.

Belladonna in Chronic Constipation.—In a certain class of cases in which the intestine is in an atonic condition, as in convalescence from fever, or in dyspepsia, Prof. Da Costa finds minim doses of fluid extract of belladonna a most excellent remedy. In two cases, related in the *Philadelphia Med. and Surg. Reporter*, the treatment was a tablespoonful of sweet oil at night and a minim of the belladonna three times a day. The immediate good results were shown to be due to the belladonna.—*New York Med. Record*, February 14.

PATHOLOGICAL SOCIETY.

Tuesday, February 17.

Jonathan Hutchinson, F.R.C.S., President, in the Chair.

(*Concluded from page* 250.)

Epithelioma of the Pharynx, involving the Larynx and Œsophagus.

Dr. Gilbart Smith exhibited this specimen, taken from a woman who, previous to March, 1879, had for eight or nine years been more or less troubled with throat symptoms. The voice at the date mentioned had become hoarse, and she had slight pain on swallowing solids, tenderness being felt chiefly on the left side of the pharynx. There was no specific history in the case. Latterly she began to lose flesh rapidly; hoarseness and aphonia increased, the left cervical glands enlarged, and much blood-stained fluid ran from the mouth. Laryngoscopic examination was difficult, but there could be seen a growth of the pharynx, reaching over into the larynx. She was admitted into the Royal Hospital for Diseases of the Chest, where tracheotomy was performed by Mr. Walsham in October last, great dyspnœa having come on. The patient gradually sank, and died on December 12. Post-mortem, the pharynx was found to present at its lower part extensive ulcerating epitheliomatous disease. The thyroid and arytenoid cartilages were partially destroyed, and the aryteno-epiglottidean folds were implicated on their pharyngeal aspect, and, though the posterior or pharyngeal wall of the larynx was encroached upon, only two or three small spots of ulceration had gone through into the larynx and trachea. The mass had also caused much narrowing, almost complete stenosis, of the œsophagus. The food, it was found, had made a passage for itself on the right side. Microscopic examination revealed much *débris* in the superficial parts, with characteristic "nests" at a deeper level. The case was interesting, the speaker remarked, because the patient had gone on so long without great uneasiness, an exacerbation taking place suddenly. He thought that there had probably been first some chronic non-malignant disease, which had latterly taken on malignant characters rather suddenly. The specimen also showed the dislike of such growths to invade the larynx or the trachea, for it presented only a very slight implication of these parts as compared with the pharyngeal mischief. And in the pharynx it was in the parts where the lymphatics and connective tissue were more abundant that the disease had made most progress. The specimen also showed that little good could have been done without complete removal of the pharynx.

Mr. Walsham also remarked on the fact that such growths, as a rule, ceased abruptly at the entrance of the larynx. This was well shown in specimens in the Hunterian Museum and in the museum of St. Bartholomew's Hospital. Perhaps the relative abundance of the lymphatics was not the sole explanation; perhaps the change in the type of epithelium in the two adjacent surfaces was also of importance. So epithelioma of anus was often found abruptly ceasing with the beginning of the mucous surface of the rectum, in which cancer of a different type might be developed.

Dr. Felix Semon (who exhibited by card a specimen of epithelioma of the larynx) said that the operation of extirpation of the larynx had now been performed nineteen times—sixteen times for carcinoma, twice for spindle-celled sarcoma, and once for perichondritis. One of the sarcoma cases was still alive, four years after the operation, and perhaps more encouraging results would be obtained if the operation were not delayed so long. The speaker pointed out that primary cancer of the larynx ran a much slower course, and with much less constitutional effect, than was the case with a similar affection of the pharynx. He compared in these respects pharyngeal diphtheria and laryngeal diphtheria (croup), and he thought these differences were probably to be chiefly accounted for by the fact that the lymphatics of the pharynx were very numerous, with very frequent anastomoses and direct connexions with those of neighbouring parts, while those of the larynx were much less numerous and were comparatively isolated. In true endo-laryngeal carcinoma the affection was very chronic, without much general disturbance; while in pharyngeal cancer the symptoms and cachexia were much more acutely developed. This was an important fact in reference to prognosis and to the question of operation. It was misleading to speak of "primary" and "secondary" carcinoma

of larynx, for, on account, as he believed, of the comparative isolation of the laryngeal lymphatics, no instance had been recorded, so far as he knew, of really secondary carcinoma of the larynx. He would therefore prefer to speak of the one set of cases as endo-laryngeal carcinoma, and of the other as carcinoma of the larynx *per contiguitatem*.

Dr. Mahomed thought that one important fact favouring the rapidity of implication of the lymphatic glands from pharyngeal mischief was the frequency with which the parts were exposed to irritation from the passage of the food.

Dr. Moore cited a specimen in the museum of St. Bartholomew's Hospital of entirely endo-laryngeal cancer, even the neighbouring glands being not involved. The appearances made one regret that laryngotomy had not been tried in that case.

Sarcoma and other Tumours of the Spermatic Cord.

Mr. Walsham exhibited a specimen of Myxo-sarcoma of the Spermatic Cord removed during life from a child thirteen months old, by Mr. Anderson, of Nottingham. The swelling had grown at first slowly, but latterly rapidly, until it attained the size of an orange. It was surrounded by a capsule of connective tissue, probably the infundibuliform fascia. The growth under the microscope exhibited mucous materials and sarcomatous elements. The child had made a rapid recovery after the operation. Specimens of growths of the spermatic cord itself, other than fatty growths, seemed to be very rare. A few cases, chiefly of medullary cancer, had been recorded.

Mr. Walsham also exhibited a specimen of Cystic Tumour of the Spermatic Cord. It seemed to have originated in the loose connective tissue of the cord.

Dr. Goodhart exhibited by card a specimen (of Mr. Gay's) of Fibro-myxoma of the Epididymis and Spermatic Cord.

Mr. H. Cripps cited a case in which Mr. Willett had removed a sarcomatous tumour of the cord in a child five months old. The growth was first observed a month after the child's birth. The child recovered satisfactorily.

Blood-Casts from the Bronchi.

Dr. Samuel West exhibited casts of the bronchial tubes expectorated six months ago by a man, aged forty-three, who is still alive. The casts were arranged in tree-like form, and had been found to consist entirely of blood-clots. The patient had slight consolidation and softening at the left apex. About six months after his illness began he had an attack of profuse hæmoptysis, followed by dulness at the left base, which, however, gradually cleared up. Two months afterwards he had a second attack of hæmoptysis, followed by marked dyspnœa, which was relieved when the casts now exhibited were expectorated. As before, there was dulness at the base, which gradually cleared up. He had as yet had no third attack of hæmoptysis. Casts consisting, like these, entirely of blood-clot were exceedingly rare; no such specimen had been exhibited before the Society. Dr. Peacock, indeed, in vol. v. of the *Transactions*, says that *all* bronchial casts are of inflammatory origin, even including those that appeared to consist of blood-clot. Dr. Cheyne had recognised their occasional occurrence, but said they were usually the precursors of fatal hæmorrhage.

The following specimens were exhibited by card:—

By Dr. W. Ewart—1. Old Syphilitic Scars on the Larynx, Trachea, and Bronchi, producing stricture of the bronchi and leading to chronic lung disease. In reference to this specimen Dr. Goodhart asked whether healed ulceration in the air-passages was ever any other than syphilitic. Dr. Payne said he had reported, in vol. xix. of their *Transactions*, a case in which there had been ulcers of the trachea and large bronchi without any history of syphilis, and with microscopic appearances different from those of syphilitic lesions. 2. Hernia of some of the Abdominal Viscera into the Left Pleura. Dr. N. Moore thought the condition in this specimen clearly due to an arrest of development, the general pleuro-peritoneal sac having been not completely divided up, so that one pleural cavity remained continuous with the peritoneal cavity. In this view of the specimen Dr. Ewart concurred.

By Dr. Hadden—1. A United Fracture of the Right Ulna from a case of Locomotor Ataxy. 2. The Lower Extremity of a Right Femur from a case of Locomotor Ataxy. Both these specimens were from patients of Professor Charcot.

By Dr. Felix Semon—Epithelioma of Larynx.

By Dr. Goodhart—Fibro-myxoma of Epididymis and Spermatic Cord.

LEGAL INTELLIGENCE.

COURT FOR CROWN CASES RESERVED.

(*Before Lord* Coleridge, *Mr. Justice* Denman, *Baron* Pollock, *Mr. Justice* Field, *and Mr. Justice* Stephen.)

The Queen *v.* Cramp.

This case has settled the question as to what is a "noxious thing" within the statute which makes it an offence to administer a "poison or other noxious thing" to a woman with intent to produce miscarriage. The case had been tried before Mr. Justice Denman at the last Kent assizes. The prisoner was indicted for having unlawfully administered "a noxious thing"—that is, half an ounce, or 600 drops, of oil of juniper—to a young woman, with intent to cause miscarriage, and the evidence was that he had so administered that quantity of oil of juniper with that intent, and that the effect of it was to cause violent vomiting and purging, and that by its action on the muscular and nervous systems it tended to produce miscarriage. On this evidence the prisoner was convicted, the question having been carefully left to the jury whether or not the oil of juniper thus administered was "a noxious thing," and they having thought that it was. After the trial the learned Judge was shown a report of a supposed ruling of the Lord Chief Justice, in consultation with Mr. Justice Hawkins, that the thing administered must be noxious or injurious in itself, and not merely when administered in excess; whereas, what those judges really held in that case ("Queen *v.* Henna," in the "Justice of the Peace") was that the quantity there administered was incapable of producing any effect. There were, however, two other cases relied on by the prisoner's counsel, in one of which a substance which caused only sickness was held not a noxious thing ("Queen *v.* Perry," 9, "Cox's Criminal Cases"), and the other in which Chief Baron Pollock said: "We are all of opinion that the thing must be noxious in itself." And it being pressed upon the learned Judge that in this state of the authorities the point was doubtful, he consented, though having no doubt himself, to state a case for the opinion of this Court.

Mr. D. Kingsford (with whom was Mr. Gill) argued the case for the prisoner, contending that "noxious thing" being coupled with "poison" meant something in its own nature poisonous or noxious and injurious, and not something injurious only in a large quantity. But he was invited by the Court to define a poison, or to instance any poisonous substance which might not be salutary if administered in certain quantities or in certain circumstances, and he admitted that it was difficult to do so. He admitted also that the case on the authority of which chiefly the case had been reserved did not really, when it was looked into, support his contention, and, though he relied on the *dictum* of Chief Baron Pollock, the Court pointed out that in neither of the cases cited were the facts similar to the present.

Mr. A. B. Kelly and Mr. Coward, for the prosecution, were not called upon, and

Lord Coleridge pronounced the judgment of the Court upholding the conviction. The words of the statute (he said) are, that "whoever shall administer to any woman, with intent to produce miscarriage, any poison or other noxious thing," shall be guilty of the offence. The fact is that the prisoner administered, with the intent stated, a quantity of oil of juniper, sufficient to do some injury, actually causing violent sickness, etc., and which, if its action had gone further, might have done more injury. The question is whether he was guilty of administering a poison or other noxious thing with that intent. The intent was found. Was it a "noxious thing"? It was proved that oil of juniper administered in the quantity in which it was administered was "noxious," and if a thing that is noxious is administered with the intent which is criminal, why, is there not the administration of a noxious thing with that intent? It is said it must be some kind of poison; and probably it must be so; but what is a poison? It is something which, as administered, is destructive or injurious to human life. There is hardly any active medicine which in large quantities may not be so, and, on the other hand, there is hardly any poison which may not in certain quantities, and in given circumstances, be salutary. It is, therefore, a question in each case of the quantity administered and the

circumstances in which it is administered. Most drugs when administered in small quantities may be medicines, and when administered in large quantities may be poisons. The reasonable construction, therefore, is that in each case it is a question for the jury whether the substance, administered as it was, and in the circumstances in which it was administered, was a "noxious thing." In this case it is not disputed that the substance as administered was "noxious," and it was administered with the intent which the Act renders criminal. All the ingredients of the offence, therefore, are made out; and though cases have been cited, none of them when looked at touches the question. Therefore, neither principle nor authority precludes us from holding what is certainly good sense—that if a person administers, with intent to produce miscarriage, something which as administered is noxious, he administers a "noxious thing." The conviction, therefore, must be affirmed.

Mr. Justice Denman concurred, and said he never had any serious doubt upon the point, and had reserved the case only out of deference to the supposed ruling of the Lord Chief Justice and his brother Hawkins, but which turned out not to be what was supposed; and his brother Hawkins had told him that he had no idea of holding anything so absurd as was supposed. He desired to add that he doubted whether a person who administered any quantity of a poison, strictly so-called, might not be liable.

Baron Pollock concurred.

Mr. Justice Field also concurred in the decision as to a "noxious thing," saying he thought it quite clear; and he also expressed his concurrence in the opinion or doubt of his brother Denman, as to whether the administration of any quantity of a poison—that is, an article known as a poison—with the intent charged, might not be within the enactment.

Mr. Justice Stephen was of the same opinion. It was clear, he said, that half an ounce of oil of juniper, which produced violent retching, etc., was a "noxious thing" within the statute; and he also said that he should be sorry to suppose that to administer any quantity of a poison with such an intent would not be a criminal offence within the statute.

The conviction, therefore, was affirmed.

The Queen *v.* Bishop.

This case raised a curious question as to what is "receiving lunatics" into a house so as to be liable to the penalties of receiving them into an unlicensed house. The case, reserved by Mr. Justice Stephen, was stated in these terms:—

"Rhoda Hulse Bishop was tried before me at Northampton on January 20 and 21, upon an indictment charging her with an offence against Section 44 of 8 and 9 Vic., c. 100, by receiving into her house two or more lunatics, such house not being an asylum or hospital registered under the Act or a house duly licensed under the Act. It was proved on the trial that the defendant received into her house several young women for the purpose of medical treatment. Her stepdaughter, who was called as a witness on her behalf, and who took part in the management of the house, described them as patients suffering from 'hysteria, nervousness, and perverseness,' and it was proved that she advertised in newspapers for patients so described. She had besides these patients one inmate who was admitted to be a lunatic, with regard to whom she had complied with the requisitions of Section 90 of the same Act. There was conflicting evidence upon the question whether any of the other patients were lunatics or not, and as to the nature and degree of restraint to which they were subjected, and there was strong evidence to show that the defendant believed in good faith, and on reasonable grounds, that no one of them was a lunatic, but that they were all suffering only under hysteria, nervousness, or perverseness. I read to the jury the interpretation of 'lunatic' given in Section 114:—'Lunatic shall mean every insane person and every person being an idiot or lunatic or of unsound mind;' and I told them that, in my opinion, these words would include everyone whose mind was so affected by disease that it was necessary for his own good to put him under restraint. I also told them that, in my opinion, the words 'receive one or more lunatics' meant 'receive as lunatics, and in order to be treated as lunatics are treated in asylums,' and I gave them this direction:—'In order that the defendant may be convicted, the jury must be of opinion that at least one other patient in the house besides the admitted lunatic was either an insane person or an idiot or a lunatic, or of unsound mind when received, and that such person was received into the house to be treated as a lunatic is treated in an asylum.' I also told them that I was of opinion that if one other such person besides the admitted lunatic was so received, an honest belief on the part of the defendant that that person was not a lunatic would be immaterial; but at the request of the counsel for the defendant I asked them, if they convicted the defendant, to find specially whether she believed honestly and on reasonable grounds that any person so received was not a lunatic. The jury found the defendant guilty, but they found that she did honestly and on reasonable grounds believe that no one of her patients was a lunatic (except, of course, the admitted lunatic). I direct the defendant to enter into her own recognizances to come up for judgment if called upon, in order that she might have an opportunity of complying with the provisions of the Act, but I reserved for the determination of the Court for Crown Cases Reserved the question whether my direction to the jury was right, in order that if it is wrong the conviction may be said aside."

Mr. Mellor, Q.C., and Mr. Poland appeared for the Crown. No one appeared for the prisoner.

The Court affirmed the conviction, holding it to be a question for the jury.

Conviction affirmed.

Dr. Köhnhorn, Staff-Surgeon in the German Army, has found the official powder, used by the soldiers to prevent foot-sores, a good palliative of the night-sweats of phthisis where internal remedies have failed. It consists of salicylic acid three parts, starch ten, talc eighty-seven parts. The whole body is to be dusted with it at night. If the skin is very dry it should be rubbed over first with lard to make the powder adhere. The patient should protect his mouth and nose during the dusting.—*Berliner Klin. Wochenschrift*, No. 1, 1880.

Caution as to Pregnant Girls.—In one of his clinical lectures (*New York Med. Record*, January 24), Prof. Gaillard Thomas, after stating that a girl whom he taxed with being pregnant at once admitted the possibility, observed, "She is a *rara avis*,—she tells the truth! You remember I told you that you would have to be very careful how you announced your diagnosis in a case like this. You are just as sure of your diagnosis as I am of mine in this case, and perhaps it is one of the first you have ever made, and on that account you are all the more anxious to announce it. But be careful how you do, for in all probability your patient will assume to get excessively angry, and denounce you as an unjust accuser; her father, mother, and all her relatives will do the same; they will take it as a matter of personal insult. They will do this when they know that you are telling the truth. The girl will be spirited away for two months or so, and when she returns she will come back to you and will tell you that you made a horrible mistake and nearly ruined the family, and that she has been examined by other physicians, perhaps by some in your own town, who will rather be delighted with the opportunity of saying that she is not pregnant. That may be so now, but she was pregnant when you examined her. Beware of it! The case we have seen to-day is a rare exception to the general rule, for you will find ninety-nine women out of every hundred will swear to the very last that they know nothing of the matter. One of these cases came under my notice some years ago. I made a diagnosis of pregnancy in a young woman, but she declared that it was preposterous, and she was so violent in her assertions that I had accused her falsely that I felt it my duty to defend my position. She was admitted into the hospital and I delivered her. When the child was born, and while yet attached to the placenta by the cord, I said to her, 'Do you confess?' She replied, 'No, I do not; you put the child there!' . . . . If you are a beginner, and cannot stand upon your own merits in the case, it would be best, before announcing your diagnosis, to have a consultation, and commit another man to the same diagnosis to which you have been committed, and so fortify yourself against attacks which would otherwise prove damaging to your professional reputation."

MEDICAL NEWS.

APOTHECARIES' HALL, LONDON.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, February 26 :—

Astley, John Dugdale, Cambridge-gardens, Notting-hill.
Berridge, William Alfred, Redhill, Surrey.
Collier, William, Stapleford, Cambs.
English, Edgar, Whitby.
Lloyd, John Jenkin, Llanelly.

The following gentlemen also on the same day passed their Primary Professional Examination :—

Dester, William Parker, Royal Infirmary, Bristol.
Johnston, Edward Cocks, Queen's Hospital Birmingham.
Shillito, Wm. Alsope, General Infirmary, Sheffield.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to all new Appointments that take place.

BATTY, W. E. L., M.R.C.S., L.S.A.—House-Surgeon to the Liverpool Northern Hospital.

ROBBINS, JAMES, M.B., C.M.—House-Surgeon to the Richmond Hospital.

SHEARS, C. H. B., L.R.C.P., M.R.C.S.—Assistant House-Surgeon to the Liverpool Northern Hospital.

NAVAL, MILITARY, &c., APPOINTMENTS.

ADMIRALTY.—The undermentioned Deputy Inspectors-General have been promoted to the rank of Inspector-General of Hospitals and Fleets in her Majesty's Fleet, with seniority of the 25th inst. :—John Watt Reid, M.D.; Ahmuty Irwin, C.B.

BIRTHS.

BOOTH.—On February 24, at The Beeches, Farnworth, the wife of J. B. Booth, M.R.C.S., L.R.C.P., of a son.

CASSIDY.—On February 29, at the County Asylum, Lancaster, the wife of D. M. Cassidy, M.D., L.R.C.P., of a son.

CLAY.—On February 26, at Plymouth, the wife of R. Hogarth Clay, M.D., of a daughter.

DE BRENT.—On February 29, at Church House, Aveley, Essex, the wife of Mortimer de Brent, M.R.C.S., L.S.A., of a son.

HADLOW.—On February 26, at 21, St. Aubyn-street, Devonport, the wife of Henry Hadlow, Royal Navy, Staff-Surgeon H.M.S. *Impregnable*, of a daughter.

MOSSE.—On January 16, at Mona, Jamaica, the wife of Deputy Surgeon-General Charles B. Mosse, C.B., of a son.

NIX.—On February 24, at 143, Great Portland-street, W., the wife of Edward J. Nix, M.D., L.R.C.S., of a daughter.

PRINGLE.—On February 20, at Angelton, Bridgend, the wife of H. T. Pringle, M.D., Medical Superintendent of the Glamorgan County Asylum, of a son.

RAPER.—On February 18, at Great Wakering, Essex, the wife of W. A. Raper, M.D., of a son.

MARRIAGES.

BUTLER—DIPLOCK.—On February 26, at Chiswick, Joseph M. J. Butler, Esq., of Saffi, Morocco, and of London, Chevalier and Consul of Portugal and of Brazil, to Esther Martha, eldest daughter of Thomas Bramah Diplock, M.D., of Arlington House, Chiswick.

GRAHAM—THOMSON.—On February 25, at Perth, John T. Graham, M.D., M.R.C.S., to Anina, daughter of William Thomson, Esq.

SCHOFIELD—JACKSON.—On February 26, at Barnsbury, Robert Harold Ainsworth Schofield, M.A. Oxon., M.B., F.R.C.S., to Elizabeth, youngest daughter of the late Sidney Vaughan Jackson, Esq., of Ballina.

TURBERVILLE—ADAMS.—On February 24, at Bath, William Turberville, M.B. Lond., to Fannie Ada, widow of James D. Adams, Esq., and only daughter of the late Richard Ashe, Esq., of Coolehane, Cork.

DEATHS.

BRAMWELL, CHARLES CRICHTON, M.D., at Nottingham, on February 26, in his 53rd year.

COPEMAN, EDWARD, M.D., F.R.C.S., Consulting Physician to the Norfolk and Norwich Hospital, on February 25, aged 70.

DUKE, HERBERT, M.B., at 321, Clapham-road, London, on March 3, aged 26.

DUNLOP, ANDREW VANS, M.D., of 18, Rutland-square, Edinburgh, at Aberdeen, on February 27.

EDDIE, WILLIAM HESLEDEN, M.R.C.S., L.S.A., J.P. for the county of Lincoln, at Barton-on-Humber, on February 21, aged 68.

FAIRBANK, THOMAS, M.D., at Windsor, on February 26, aged 37.

HARTLEY, HAROLD CHARLES CHILTON, youngest son of Charles Hartley, M.R.C.S., at Lynton, North Devon, on February 25, aged 16 months.

HEALE, AGNES, wife of James Newton Heale, M.D., of Medecroft, Winchester, on March 1, aged 70.

MAGINNISS, ROBERT MAUDE, B.A., M.D., at 158, Camden-road, on February 28, in his 26th year.

PROCTOR, WILLIAM, M.D., at Boleyns, Bocking, Essex, on February 29, in his 80th year.

RICHARDSON, MARK, M.D., late of the Bengal Medical Service, at 7 Baker-street, Portman-square, on February 28, in his 75th year.

TROLLOPE, ESTHER SARAH, wife of Thomas Trollope, M.D., at Maze-hill, St. Leonards-on-Sea, on February 26, aged 46.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

COUNTY AND COUNTY OF THE BOROUGH OF CARMARTHEN INFIRMARY.—House-Surgeon. He must be unmarried, and have a knowledge of the Welsh language, and be registered to practise both in medicine and surgery. He will have the privilege of taking two apprentices, and must agree not to practise in the county of the borough of Carmarthen for a period of five years from the day of his election. Applications, with testimonials, to be sent to the Secretary, Mr. H. Howells, 58, King-street, Carmarthen, on or before March 31.

GLAMORGANSHIRE AND MONMOUTHSHIRE INFIRMARY AND DISPENSARY, CARDIFF.—House-Surgeon. Candidates must be registered in medicine and surgery. Applications, with testimonials, to be sent to the Chairman of the Committee, on or before March 8. Any further information may be obtained of the Secretary, Herbert R. Vachell, M.B.

GREAT YARMOUTH HOSPITAL.—House-Surgeon. Candidates must be unmarried and duly registered to practise medicine and surgery. Applications, with testimonials, to be sent to R. R. B. Norman, Esq., Hon. Secretary, on or before March 18.

LEITH HOSPITAL.—Assistant-Surgeon. Applications, with testimonials, to be sent to the Secretary, Mr. G. V. Mann, 33, Bernard-street, Leith, from whom further particulars can be obtained, on or before March 10.

LONDON LOCK HOSPITAL (FEMALE DEPARTMENT), WESTBOURNE-GREEN, HARROW-ROAD, W.—Assistant House-Surgeon. Candidates are requested to send in their applications, with testimonials, to G. F. Fred. Abraham, Esq., Secretary, on or before March 17.

NEWPORT (MON.) ODD FELLOWS' MEDICAL AID ASSOCIATION.—Assistant Medical Officer. Candidates must be doubly qualified. Applications, with testimonials, to be sent to the Secretary by March 20.

WARWICK COUNTY LUNATIC ASYLUM.—Junior Assistant Medical Officer. Candidates must not be over twenty-five years of age, unmarried, and qualified in medicine and surgery. Early application, with testimonials, to be made to the Medical Superintendent, The Asylum, Hatton, Warwick.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Leigh Union.—Mr. James Brideoake has resigned the Lowton District and the Workhouse : area of District 7076 ; population 11,653 ; salary £35 per annum. Workhouse—salary £30 per annum.

Manchester Township.—Dr. John Williams has resigned the office of Medical Officer of the Industrial Schools at Swinton : salary £130 per annum.

Romford Union.—Mr. Alfred Wright has resigned the First District : area 17,861 ; population 11,487 ; salary £45 per annum.

APPOINTMENTS.

Doncaster.—Alfred H. Allen, F.C.S., as Analyst for the Borough.

Dore Union.—John Powell, L.S.A., to the Kentchurch District and the Workhouse.

Driffield Union.—Robert Savile, M.D. Edin., M.R.C.S. Eng., to the Mafferton District.

New Winchester Union.—Robert Shiels, L.R.C.P. Edin., L.R.C.S. Edin., to the Micheldever District.

Pontefract Union.—Walter S. Simpson, M.R.C.S. Eng., L.R.C.P. Lond., to the Workhouse.

TEMPERATURE OF THE SOIL DURING SEVERE COLD.—During the recent exceptionally cold weather, MM. E. and H. Becquerel have made some investigations as to the depth of the soil to which the depression of temperature was communicated, according to whether this was covered by or denuded of grass, and in spite of the thick layer of snow which covered it. The electrical thermometers which were placed by M. Becquerel, sen., at the Muséum d'Histoire Naturelle, and which have been daily observed during the last fifteen years, were employed. On December 4, twenty-five centimetres of snow covered the soil. Under the turf, before the fall of snow as well as after it, after the depth of five centimetres the temperature remained constantly above zero C. (32° Fahr.), the turf acting as a kind of wadding, preserving the lower portions from freezing. At five centimetres depth of a denuded soil a temperature of three degrees below zero was observed before the fall of snow. After then, and in spite of the depression of the temperature of the air, that of the soil, at that depth, exhibited variations. It must be concluded that a thick layer of snow, although acting as a screen, does not prevent changes of temperature being perceived at a certain depth. The snow alone will not preserve the bodies which it covers from frost; but if there exist beneath the snow, at the upper part of the soil, a body such as straw, or even the radicles of a sufficiently thick turf, the bad conductibility of these matters suffices to prevent freezing.—*Union Méd.*, February 24.

Doings of the Metropolitan Board of Works.—At the last week's meeting of the Metropolitan Board of Works, amongst other business transacted, the Parliamentary Committee recommended that two counsel be instructed to appear in support of the Board's petitions against the South Metropolitan Gas Company's Bill, against the Phœnix Gas Company's Bill, on behalf of the Board in the case of the Southwark and Vauxhall Waterworks Company's Bill, and in support of the Board's petition against the Sea-Water Supply Bill, and the Dagenham and District Farmers' and Sewage Bill. In reply to Mr. Richardson, who was unable to answer a question put to him by Mr. Lloyd, Sir Joseph Bazalgette stated that there was a danger of the effluent water from the drainage works at Kingston entering the Thames near that portion of the river whence water was drawn by the companies supplying the public with water. On the motion of Mr. Lloyd, the matter was therefore referred to the Works and General Purposes Committee. A letter on behalf of the managers of the Metropolitan Asylums District, requesting the Board to lend the managers the further sum of £51,716, being the amount authorised to be raised on loan under the outstanding orders of the Local Government Board, was referred to the Finance Committee.

Longevity.—At the end of a series of articles on the centenarians of various countries, M. Legoyt (*Gaz. Hebdomadaire*, February 27) sums up the conditions favourable to the attainment of great age. Among these, temperance occupies the first rank, all the facts that have been collected testifying to the agency of this. In 1860 the French Ministry addressed a circular to all the Préfets, desiring them to institute inquiries as to the favourable conditions, and the replies almost unanimously indicated great sobriety, regular labour (usually in the open air), daily exercise short of fatigue, early hours, a comparatively well-to-do life, calmness of mind in meeting troubles, moderate intellectual power, and a family life. The happy influence of marriage on the duration of life is universally admitted, and remarriage does not seem to be unfavourable. The Préfets also indicated heredity as a frequent cause, and the influence of climate is also admitted. This, however, is separable with difficulty from other causes which may be operating simultaneously; but if all things were otherwise equal, it would seem that southern are less favourable to longevity than northern climates. A country life is doubtless favourable to longevity; but even in large cities, and especially London, a certain number of centenarians occur, and that even in unhealthy quarters; and although a certain amount of well-being, when united to sobriety, and not neutralised by political or commercial agitation, exerts a favourable influence, yet, as the English and French returns show, centenarians are met with in the lower classes, and even in poor houses. Agricultural employment is favourable to the duration of life; and the great majority, and almost the totality, of centenarians have followed this occupation.

Pensions to Doctors' Widows and Orphans.—A great number of medical practitioners have petitioned the Legislature to sanction the bestowal of pensions on the widows and orphans of practitioners who have lost their lives while pursuing their calling amidst infectious and epidemic disease. M. Talandier, in the name of the Committee of Petitions of the Chamber of Deputies, reports highly in its favour, declaring in a somewhat declamatory style that the doctor who dies in the performance of his duties is just as much entitled to have his relatives provided for as the soldier who falls on the field of battle. He admits that it is a vast question, as the same arguments may be used with regard to all those who pursue dangerous professions and occupations. However, he is in nowise deterred by this, contenting himself with exclaiming that "Every profession is, for those who pursue it, a field of battle; and every profession is also, for those who bring to it the austere sentiment of duty and the heroic spirit of devotion and sacrifice, a field of honour." He does not think that the argument that the members of these professions enter them voluntarily, while the soldier is forced to expose his life to risk, is worth consideration; and terminates his report by recommending that the petition should be immediately brought under the notice of the Ministers of the Interior and of Public Instruction. This was at once agreed to.—*Union Méd.*, February 28.

Litholapaxy.—Mr. Weir, Surgeon to the New York and Roosevelt Hospitals, contributes to the January number of the *American Journal of Medical Science* an account of ten additional cases of litholapaxy. These bring the number of published cases, he states, up to seventy-seven. Only four deaths have taken place, or one death in nineteen, as compared with one in thirteen in ordinary lithotrity. "This result," he observes, "considering the novelty of the operation and the fact that a number of lithotomy cases, or those that would have been so, are included in the list, is extraordinary; but properly to pass judgment on any new operation requires larger figures than these. Several years will probably elapse before the profession can rightly estimate the merits of litholopaxy. Furthermore, it is improper at any time to compare it with lithotrity, for it is an operation which not only will embrace the latter, but invades to a large extent the domain of lithotomy. How far this invasion may progress, time must tell, but the limits of a crushing operation have apparently been justifiably advanced from the diameter of ¼ one inch, allowed to the older operation of lithotrity, to two inches and a quarter, as has been done successfully by Bigelow."

A Splinter in the Eye for Forty-seven Years.—Dr. Sigismund relates the following remarkable case in the *Berliner Klin. Woch.* for February 2:—A patient, aged fifty-nine, consulted him for an inflammation of the eye which had lasted for some months. On examination there was found to be conjunctivitis with a cloudiness of the lower half of the cornea, in which was also perceived a whitish cicatrix. On dilating the pupil a body the size and shape of the end of a pen was observed, and the lens was found to be completely opaque. Considerable pain was produced by pressure or employment of the eye. According to the patient's account, when twelve years of age, while climbing a tree, he had received a blow on the eye from a branch, which blinded him. Pains in the eye, however, were not perceived until a few months ago, since when they had been severe and constant. Although some regarded the upright body to be seen in the middle of the pupil as exudation, Dr. Sigismund, convinced that it was a foreign body, undertook its extraction on account of the pain it was now causing, and removed both it and the lens. He found it to be a wooden splinter five millimetres long and two millimetres broad at its largest end. The lens was of a dark-red colour from the presence of blood. After the healing of the wound all pain and tenderness ceased, but at present the patient can only distinguish light from darkness with that eye.

Insufficient Diet in the United States.—Prof. Gaillard Thomas, in an excellent clinical lecture on leucorrhœa (*New York Med. Record*, January 24), after learning from one of the subjects of the affection that she took scarcely any animal food, and no wine or beer, observed, "Well, gentlemen, I have nothing to say about that bill of fare, other than I think every student of medicine, after graduating, and before entering upon practice, should be kept upon it about two weeks, so as to impress upon his mind how these patients are kept sick. Just compare that bill of fare with what a man in active life eats, and with what an ordinary woman in active life should eat. You must remember that in this country this system of starvation is more general than in any other. If you were to travel in England you would find no such bills of fare as this. The people there eat four or five meals a day, and of the most nutritious food, drinking a good deal of beer and wine. Now, the Americans, I think, have the misfortune of being the most temperate people in the world. The labouring classes do not take enough food and drink to sustain them in a condition of health. I am talking of a class, and not of exceptions. The diet of American women, as a class, you will find, is fairly illustrated by the case before you. You know, we read of the strong, rosy-cheeked, and buxom country maiden, so frequently described by old English writers; but go into the farming districts in America, and do we find them? Not a bit of it. They live upon the same kind of fare as this patient; and in our country houses you will find women pale, lank, and showing absolute want of nourishment. Remember, I am not speaking as a reformer, but as a physician. If you want to cure these patients, you will have to commence in the kitchen, and make them eat more food and of a more nutritious nature."

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Actuary.—Yes, Dr. William Farr is a member of the College.

Mr. Luther Holden.—The portrait of this gentleman, just deposited at the College of Surgeons, of which he is President, was taken by Mr. Stowers, a rising young artist, whose father and brother are members of the College.

Urban and Rural Sanitary Works.—The Town Council of Scarborough has directed plans to be prepared for a proposed new pumping-station at Irton, and an additional reservoir at Oliver's Mount.——An inspector of the Local Government Board has just held an inquiry at Grantham with reference to an application from the Town Council for sanction to borrow £15,000 for sewerage works and sewage disposal. It is proposed to deal with the sewage on a farm at Marston.——The Hexham Rural Sanitary Authority has ordered to be prepared a scheme and estimates for supplying several townships of the district with water. Some of the large villages are almost without any supply, even for domestic purposes. A special committee has also been appointed.——The Local Government Board has sanctioned the borrowing of £83,000 by the Town Council of Colchester for the purchase of the local waterworks.

Sanitas.—Yes, it is stated that the French Government is about to revive the plan of draining Paris after the London system. The French Government officials have obtained leave from the Metropolitan Board of Works and the English Government for an inspection to be made.

Infringing the Factories Act, and Trade Depression.—A cotton-spinning company has been summoned at the Ashton-under-Lyne Police-court, by Mr. Sale, inspector of factories, for infringing the Factories Act by employing twelve women at a time when work for the day should have ceased. The inspector stated that he had already twice cautioned the defendants, once for a similar offence, and once for allowing machinery to be cleaned in the dinner-hour. The offence was admitted, but the magistrates were asked "to take into consideration the fact that trade had been exceedingly bad, and that the manager was anxious to do what he could for the shareholders." The Bench imposed a fine of £1 and costs in each of the twelve cases.

On dit.—The report that Dr. Richardson is going to have the wine left to him by Sir W. Trevelyan, analysed, with a view of ascertaining the chemical products in old wines, has been contradicted.

The Peabody Fund.—The trustees have made arrangements for acquiring from the Board of Works six plots, comprising an area of upwards of nine acres, situated in the following localities:—Glasshouse-street, near the Mint; Whitecross-street, St. Luke's; Bedfordbury; Great Wild-street, Drury-lane; Pear Tree-court, Clerkenwell; and Old Pye-street, Westminster. These sites will be covered with buildings of the character hitherto erected by the trustees. The sites cost about £100,000, and to cover them with buildings will, it is calculated, require an outlay of about £360,000, to be met partly by a Government 3½ per cent. loan, to be repaid in fifteen years. The trustees did not incur any expenditure in new buildings or purchases of land in the year 1879. Up to the present time they have provided 5170 rooms, exclusive of bathrooms and washhouses. These rooms comprise 2355 separate dwellings, which are occupied by 9905 persons. The new buildings are to afford accommodation for 10,000 more residents.

Bicyclist.—The Queen's Bench has decided that a bicycle is not a carriage within the toll clauses of the Turnpike Act. The conviction of the toll-keeper in Gloucestershire for illegally exacting toll was therefore affirmed.

Census Returns, Sweden.—According to the report published by the Central Statistical Bureau of Sweden for 1878, at the close of that year the population of the kingdom was 4,531,863, being an increase for the year of 1·06 per cent. The great numerical excess of the female population has been for many years decreasing. At present the ratio is about 1055 women for every 1000 men. The increase is less in the northern provinces. The total number of children born during the year was 138,385, of whom 2·83 were dead. As to sex, there were 1062 boys born for every 1000 girls. The number of illegitimate children born was 9·84 of the entire number.

Life in Whitechapel again.—The Sanitary Inspector reported to the last meeting of the Whitechapel District Board of Works a visit he had paid to some houses in Great Garden-street, in one of which he found "a serious nuisance," which consisted of two rooms on the ground floor containing about forty women and some men. The occupier is a foreigner, who obtains his living by letting each room to persons who take their meals, and remain in the rooms the greater part of the day and night. The lodgers were of the lowest class, extremely dirty in themselves, in their clothing, and indeed everything around them was most offensive. It was stated that this foreigner obtained a living by similar means some years ago in Spitalfields. The nuisance was then put a stop to, and the delinquent had been lost sight of till discovered in Great Garden-street.

The Copland Fund.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—In closing the above Fund, I beg to state that the whole sum collected amounted to £101 5s., which I have handed over to Mrs. Copland; and I am desired, on the part of the Committee, to thank the subscribers and the Editor of the *Medical Times and Gazette* for their kind assistance.

I am, &c., R. H. Semple, M.D.,
8, Torrington-square, March 1. Treasurer of the Fund.

Dr. Williams.—According to the following extract from the register of births and baptisms for the parish of East Kilbride, Lanarkshire, which was obtained for the late Sir William Fergusson, it appears that the correct date of Hunter's birth is February 13:—"No. 1728.—John a lawfull son procreat betwixt John Hunter and — Paul, born February 13, and baptized March 30, 1728." At the College of Surgeons it has always been considered, and is so still, that he was born on the following day. The Hunterian Oration has always been delivered on St. Valentine's Day.

Donald R.—Yes, subscriptions of a guinea a year were paid by the various unions in Ireland to the Dublin Cow-pock Institution for whatever supply of lymph they required. This Institution was also supported by other subscriptions, by money received from the sale of lymph, and by a Government grant of £400 a year.

Paucity of Doctors.—It appears from the census, just published, ordered by the Austrian authorities to be taken in the occupied provinces of Bosnia and Herzegovina, that the number of doctors was ninety-four in a population on June 15 last of 1,142,147 persons, of whom 599,026 were males and 543,121 females.

A Provincial Teacher.—We believe that the Board of Examiners has or will recommend to the Council of the College that a candidate referred at the primary examination for the diploma of member be required before his admission to re-examination to produce, in addition to the necessary certificate of three months' extra dissections, a certificate of having attended a further course of practical physiology extending over a period of three months subsequently to the date of his reference.

A Nurse.—Sanitary authorities may order the destruction of infected clothing and give compensation for the same.

Vesalius, Manchester.—Why not write to Professor Flower? The celebrated Evelyn says—"My Italian collection being now arrived, came Moulins ye great chirurgeon, to see and admire ye Tables of Veines and Arteries which I purchased, and caused to be drawne out of several humane bodies at Padua. Sir Charles Scarborough was instant with me to give these Tables to ye College of Physicians, pretending he would not onely reade upon them, but celebrate my curiositie as being *ye first who caused them to be compleated in that manner* and with that cost; but I was not so willing yet to part with them as to lend them to ye College." These identical tables are now in the museum of the College of Surgeons.

Sir John Soane's Museum, Lincoln's-inn-fields.—The trustees, at a meeting held on the 19th ult., decided that during the months of April, May, June, and July the Museum should be opened to the public on four days a week—Tuesday, Wednesday, Thursday, and Saturday.

G. O'C., Chalk Farm.—We believe little more than surface water passes from the Zoological Society's Gardens into the Regent's Canal, the whole refuse of the animals being removed by a contractor. The water draining from the gardens into the canal was examined some time back by the Medical Officer of Health of St. Pancras, and pronounced to be free from deleterious matter, and purer than the water of the canal.

COMMUNICATIONS have been received from—

Dr. James Stark, Portobello; Dr. Vinen, London; Dr. William Carter, Liverpool; The Honorary Secretaries of the Manchester Medical Association; The Secretary of the Food of Health Restaurant, Farringdon-road, London; The Registrar of Apothecaries' Hall, London; The Secretary of the St. John's Hospital for Diseases of the Skin; Dr. William Webb, Wirksworth, Derby; Dr. Robert Semple, London; Dr. Dougall, Glasgow; Dr. Octavius Sturges, London; Dr. Wilhelm Schlesinger, Vienna; The Editor of "Iron"; The Honorary Secretaries of the Society of Medical Officers of Health; The Editor of the "Examiner"; The Honorary Secretary of the Medical Society of London; The Secretary of the Royal Medical and Chirurgical Society of London; Mr. J. Chatto, London; Mr. T. M. Stone, London; Mr. D. Colquhoun, London; Dr. Edward I. Sparks, Mentone; Dr. Fredk. Taylor, London; Mr. G. B. Longstaff, Wandsworth; Dr. J. Crichton Brown, London; Mr. Watson-Cheyne, London; Dr. Ward Cousins, Southsea; The Registrar-General, Edinburgh; Dr. W. E. Steavenson, London; Mr. Clement Lucas, London; Mr. Noel A. Humphreys, London; Dr. W. R. Gowers, London; Dr. J. W. Moore, Dublin; The Secretary of the Royal Institution; Mr. T. W. Bacot, Seaton, Devon; Dr. F. Churchill, London; London Cottage Mission; Mr. Wm. Newmarch, London; The Secretary of the Poor-Law Medical Officers' Association, London; The Secretary of the Association of Surgeons Practising Dental Surgery, London.

BOOKS AND PAMPHLETS RECEIVED—

Brief Notes regarding the Indian Medical Service—Obstetrical Transactions (vol. xxi.) for 1879—Ambulance Lectures by Lionel A. Weatherly, M.D.—The Constitution of the Earth, by Robert Ward, Esq.—Sixth Annual Report of the Medical Officer of Health to the Urban Sanitary Authority for the City of Worcester—Report of the Liverpool Sailors' Homes, Dispensary, and Nautical School for the year 1879—Sanitary Organisation of Nations, by Henry J. Bowditch, M.D.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Centralblatt für die Medicinischen Wissenschaften—Nature—Revue Médicale—El Siglo Medico—Galveston Medical Journal—American Bookseller—National Board of Health Bulletin—Night and Day—Quarterly Journal of Inebriety—National Anti-Compulsory Vaccination Reporter—Vaccination Inquirer—Occasional Notes—Sunday at Home—Boy's Own Paper—Leisure Hour—Girl's Own Paper—Index Medicus—Louisville Medical News—Centralblatt für Gynäkologie—Mornington Mirror—Wiener Medizinische Blätter, 1 to 8—Miuerva—Gazette Hebdomadaire—Edinburgh Medical Journal—Veterinarian—Students' Journal and Hospital Gazette—Annals of the Anatomical and Surgical Society—Clinical News—Philadelphia Medical Times—Monthly Homœopathic Review—Boston Medical and Surgical Journal—Journal of Trinity College, London—College and Clinical Record—Glasgow Medical Journal—Archives Générales de Médecine—Observer and Chronicle, February 21.

APPOINTMENTS FOR THE WEEK.

March 6. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.: King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

Royal Institution, 3 p.m. Mr. Saintsbury, "Dryden and his Period."

8. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Royal College of Surgeons of England, 4 p.m. Prof. W. H. Flower, "On the Comparative Anatomy of Man."

Medical Society of London (107th Anniversary).

9. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Royal Institution, 3 p.m. Prof. Schäfer, "Physiology of Muscle."

Royal Medical and Chirurgical Society (Council Meeting), 8½ p.m. Mr. A. E. Barker, "On Nephrectomy by Abdominal Section."

10. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Lister), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.; National Orthopædic, Great Portland-street, 10 a.m.

Royal College of Surgeons of England, 4 p.m. Prof. W. H. Flower, "On the Comparative Anatomy of Man."

Royal College of Physicians, 5 p.m. Third Croonian Lecture—Dr. Cayley, "On some Points in the Pathology and Treatment of Typhoid Fever."

Hunterian Society (London Institution), (Council Meeting, 7.15 p.m.), 8 p.m. Dr. F. Warner, "A Case of Athetosis associated with Epilepsy." Mr. J. Startin, "A Case of Elephantiasis." Dr. Carrington, "Cancer of the Bile-Duct Fatal by Suppuration of the Liver."

Royal Microscopical Society, 8 p.m. Prof. M. Duncan, "On a Sponge Parasite within Carpentaria Raphidodendron." Prof. E. Abbe, "On the Functions of Angular Aperture." Dr. H. Gibbes, "Double and Treble Staining of Animal Tissues." M. A. Nachet, "On a Petrographical Microscope." Mr. J. Badcock, "On Podophrya Quadripartita."

11. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m. Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

Royal Institution, 3 p.m. Prof. Dewar, "Recent Chemical Progress."

12. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

Royal College of Surgeons of England, 4 p.m. Prof. W. H. Flower, "On the Comparative Anatomy of Man."

Royal College of Physicians, 5 p.m. First Lumleian Lecture—Dr. W. Roberts, "Researches on the Digestive Ferments, and the Preparation and Use of Artificially Digested Food."

Royal Institution (Council Meeting, 8 p.m.), 9 p.m. Dr. C. W. Siemens, "The Dynamo-Electric Current and some of its Applications."

Quekett Microscopical Club (University College), 8 p.m. Meeting.

Clinical Society (Council Meeting), 8½ p.m. Mr. Eve, "On a Case of Impacted Fish-Bone in the Œsophagus, Penetrating the Diaphragm and Pericardium, and Wounding the Heart." Dr. Greenhow, "On a Case of Typhoid Fever, associated with Acute Nephritis and Profuse Hæmaturia, without Dropsy." Dr. Buzzard, "On a Case of Rapid and almost Universal Paralysis, involving the Four Extremities, Both Sides of the Face, Respiration, and Deglutition; Recovery." Mr. Eve, "On a Case of Fracture extending through the Temporal Bone." Mr. Chitton, "On a Case of Femoral Aneurism; Ligature of the External Iliac Artery; Recovery." Dr. Crocker will exhibit a Case of Herpes Iris.

VITAL STATISTICS OF LONDON.

Week ending Saturday, February 28, 1880.

BIRTHS.

Births of Boys, 1432; Girls, 1314; Total, 2746
Corrected average in the 10 years 1870-79, 2587·8.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	872	790	1662
Average of the ten years 1870-79, corrected to increased population	909·3	893·5	1802·8
Deaths of people aged 80 and upwards ...	...	...	68

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa
West	561359	2	3	2	1	14	...	3	...	2
North ...	751729	4	4	8	1	41	...	...	...	4
Central ...	334369	...	4	3	...	10	...	2	...	...
East	639111	2	2	7	2	15	...	3	...	...
South	967692	5	5	26	1	55	1	3	1	3
Total	3254260	13	18	46	5	135	1	11	1	9

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·798 in.
Mean temperature	40·5°
Highest point of thermometer	52·4°
Lowest point of thermometer	28·4°
Mean dew-point temperature	36·1°
General direction of wind	W.S.W., N., & N.N.E.
Whole amount of rain in the week	0·35 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, Feb. 28, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1880.*	Persons to an Acre. (1880.)	Births Registered during the week ending Feb. 28.	Deaths Registered during the week ending Jan. 28.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3664149	48·6	2746	1662	52·4	28·4	40·5	4·72	0·35	0·89
Brighton	107321	45·6	57	39	51·0	31·0	40·1	4·50	0·06	0·15
Portsmouth ...	134224	29·9	95	60	...	...	...	...	...	...
Norwich	85827	11·5	58	39	51·8	32·5	40·3	4·61	0·28	0·71
Plymouth	74993	53·8	59	46	53·0	32·0	42·4	5·78	0·15	0·38
Bristol	213536	48·0	158	79	48·7	32·0	40·2	4·55	0·44	1·12
Wolverhampton ...	75970	22·4	57	21	49·1	29·3	38·1	3·39	0·29	0·74
Birmingham ...	394738	47·0	277	155	...	...	...	...	...	...
Leicester	129912	40·6	96	46	...	...	...	...	...	...
Nottingham ...	173827	17·4	137	106	51·4	27·9	39·2	4·00	0·08	0·20
Liverpool	544056	104·4	368	282	...	...	...	...	...	...
Manchester ...	363130	84·6	267	169	...	...	...	...	...	...
Salford	185786	35·9	133	77	...	...	...	...	...	...
Oldham	115413	24·7	83	59	...	...	...	...	...	...
Bradford	197196	27·3	117	64	48·0	31·7	40·4	4·66	0·33	0·84
Leeds	318929	14·8	207	104	48·0	36·0	40·5	4·72	0·24	0·61
Sheffield	304938	15·5	194	125	52·0	33·0	40·7	4·83	0·37	0·94
Hull	149627	41·2	103	72	52·0	30·0	39·5	4·17	0·22	0·56
Sunderland ...	116730	42·2	83	47	56·0	34·0	43·0	6·11	0·20	0·51
Newcastle-on-Tyne	149366	27·8	111	70	...	...	...	...	...	...
Edinburgh	229839	54·8	147	94	49·0	32·2	42·1	5·62	0·18	0·46
Glasgow	589598	97·7	382	238	49·5	35·5	43·4	6·33	0·32	0·81
Dublin	314666	31·3	207	253	52·1	33·0	43·0	6·11	0·12	0·30
Total of 23 Towns in United Kingdom	8633571	39·2	6148	3907	56·0	27·9	40·9	4·94	0·24	0·61

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·80 in. The highest reading was 30·29 in. on Wednesday morning, and the lowest 29·34 in. on Saturday morning.

* The figures for the English and Scottish towns (except for Nottingham, Salford, and Oldham) are the numbers enumerated in April, 1871, raised to the middle of 1880 by the addition of nine years and a quarter's increase, calculated at the rate which prevailed between 1861 and 1871. Revised estimates have been adopted for Nottingham, Salford, and Oldham, based upon special returns of inhabited houses existing within those boroughs. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

CROONIAN LECTURES.

ON SOME POINTS IN THE PATHOLOGY AND TREATMENT OF TYPHOID FEVER.

Delivered at the Royal College of Physicians of London.

By WM. CAYLEY, M.D., F.R.C.P.,

Physician to the Middlesex Hospital and to the London Fever Hospital; Lecturer on Medicine to the Middlesex Hospital Medical College.

Lecture I.

In taking for the subject of these lectures the Pathology and Treatment of Typhoid Fever, I fear I may seem to have chosen one which has been completely exhausted, and about which, therefore, little or nothing new remains to be said; its general pathology, its mode of origin and dissemination, its distinction from other diseases, have indeed been thoroughly investigated, owing in no small degree to the researches of eminent Fellows of this College, among whom I need only enumerate the names of Stewart, Jenner, and Murchison.

Of late years, too, there has been a pretty general agreement as to the principle on which the disease should be treated; but, notwithstanding, upwards of 73,000 persons died during the past nine years in England alone of typhoid fever.

In the face, then, of this great mortality, I think it may not be without some degree of interest and advantage if we again pass in review some of the received opinions as to its nature and treatment. I do not, however, propose again to discuss the distinction between typhoid and other fevers, or to give any clinical account of the disease, but to confine myself to the consideration of some points about which more or less difference of opinion and practice still prevails. And I shall first consider the causation and mode of dissemination; secondly, some points in the pathology; and lastly, the treatment.

In proceeding to consider the mode of origin and propagation of typhoid fever we are at once arrested by the question, What are the nature and properties of the poison which is supposed to give rise to the disease?

Now, the typhoid poison has up to the present time eluded all attempts to isolate it or to demonstrate its nature either by microscopical examination or chemical analysis; we are only conscious of its existence by the effects which it produces on the human organism. Nevertheless, some of its properties are known with tolerable certainty: (1) when introduced into the system it multiplies; (2) it is contained in the alvine discharges of persons suffering from the disease; (3) it retains its activity for an indefinite time after it has passed out of the body, when placed under favourable conditions, these conditions being the presence of decaying animal matter and moisture. Hence its usual habitats out of the body are drains, sewers, cesspools, dung-heaps, wet manured soils. And there are some grounds for supposing that in these situations also it may possess the power of multiplying. Lastly, in all probability it is particulate, and not either liquid or gaseous.

The actual nature of the poison—whether it be, according to the hypothesis most generally accepted, some kind of fungus, or microzyme, or protoplasm, in a word, a *contagium vivum*, or whether, as maintained by others, it is some derivative of albumen, capable of exercising a catalytic action on other albumen,—I do not propose to discuss, as it is a question at present rather of theoretical than practical interest, and it is one, moreover, for whose final determination the data are hardly yet sufficient.

A subsidiary question to this, but one of considerable practical importance, is whether the poison can be generated *de novo* from decaying organic matter, whether it be pythogenic, as was so ably maintained by Dr. Murchison, or whether it can only arise by continuous propagation, as was maintained no less ably by Dr. William Budd.

The arguments on both sides may be very briefly stated.

In favour of its origin *de novo* it is asserted that typhoid fever has often broken out in isolated situations—as solitary farmhouses, far removed from, and holding no communication with, places where the disease exists; and many such instances are given by Dr. Murchison. On the other hand, it has been proved incontestably by many instances, both in this country and on the Continent, that all the conditions supposed to be required for its generation may be present for an indefinite time—as percolation of sewage into wells supplying drinking-water,—and yet the disease does not show itself till the poison is introduced by the arrival of an infected person, when an outbreak at once takes place.

Now, I would submit that this latter argument far outweighs the former; for otherwise, if it be proved that all the conditions necessary for the origination of the poison are present, as shown by its subsequent development when the germs are introduced, and yet it does not develope, we should have to admit that the same causes are not always followed by the same effects.

The instances in which persons in the latent stage of typhoid fever, or actually ill with it, have carried the disease to distant places, and caused it to spread, are so numerous that I believe that this mode of propagation is now universally admitted; the communication of the disease taking place not by direct contagion from the sick to those brought into immediate contact with them, but by the ordinary mode of sewage contamination.

I will quote in illustration three instances which have occurred in this country.

One is the famous epidemic at Over Darwen. The water-supply pipes of the town were leaky, and the soil through which they passed was soaked at one spot by the sewage from a particular house. No harm resulted till a young lady suffering from typhoid fever was brought to this house from a distant place: within three weeks of her arrival the disease broke out, and 1500 persons were attacked.

Another well-marked instance occurred at Calne. A laundress occupied the middle one of a row of three houses supplied by one well, into which the slop of the laundress's house leaked. She on one occasion received the linen soiled by the discharges of a case of typhoid fever, and after fourteen days cases occurred in all three houses.

At Nunney a number of houses received their water-supply from a foul brook contaminated by the leakage of the cesspool of one of the houses, but no fever showed itself till a man ill with typhoid came from a distance to this house. In about fourteen days an outbreak of fever took place in all the houses.

Many equally striking instances might be quoted from foreign sources; I will, however, only adduce the well-known one of Lausen, as it illustrates some other points of great importance in the etiology and prophylaxis of the disease.

Lausen is a village through which I have no doubt most of my hearers have passed, as it lies on the railway between Basle and Olten, shortly before coming to the great Hauenstein Tunnel. It is situated in the Jura, in the valley of the Ergolz, and consists of 103 houses, with 819 inhabitants; it was remarkably healthy, and resorted to on that account as a place of summer residence. With the exception of six houses it is supplied with water by a spring with two heads which rises above the village at the southern foot of a mountain called the Stockhalder, composed of oolite. The water is received into a well-built covered reservoir, and is distributed by wooden pipes to four public fountains, whence it is drawn by the inhabitants. Six houses had an independent supply—five from wells, one from the mill-dam of a paper factory.

On August 7, 1872, ten inhabitants of Lausen, living in different houses, were seized by typhoid fever, and during the next nine days fifty-seven other cases occurred, the only houses escaping being those six which were not supplied by the public fountains. The disease continued to spread, and in all 130 persons were attacked, and several children who had been sent to Lausen for the benefit of the fresh air fell ill after their return home. A careful investigation was made into the cause of this epidemic, and a complete explanation was given. Separated from the valley of the Ergolz, in which Lausen lies, by the Stockhalder, the mountain at the foot of which the spring supplying Lausen rises, is a side

valley called the Furlenthal, traversed by a stream, the Furlenbach, which joins the Ergolz just below Lausen, the Stockhalder occupying the fork of the valleys. The Furlenthal contained six farm-houses, which were supplied with drinking-water, not from the Furlenbach, but by a spring rising on the opposite side of the valley to the Stockhalder.

Now, there was reason to believe that, under certain circumstances, water from the Furlenbach found its way under the Stockhalder into one of the heads of the fountain supplying Lausen. It was noticed that when the meadows on one side of the Furlenthal were irrigated, which was done periodically, the flow of water in the Lausen spring was increased, rendering it probable that the irrigation water percolated through the superficial strata and found its way under the Stockhalder by subterranean channels in the limestone rock. Moreover, some years before, a hole on one occasion formed close to the Furlenbach by the sinking-in of the superficial strata, and the stream became diverted into it and disappeared, while shortly after the spring at Lausen began to flow much more abundantly. The hole was filled up, and the Furlenbach resumed its usual course.

The Furlenbach was unquestionably contaminated by the privies of the adjacent farm-houses, the soil-pits of which communicated with it. Thus from time immemorial, whenever the meadows of the Furlenthal were irrigated, the contaminated water of the Furlenbach, after percolation through the superficial strata and a long underground course, helped to feed one of the two heads of the fountain supplying Lausen. The natural filtration, however, which it underwent rendered it perfectly bright and clear, and chemical examination showed it to be remarkably free from organic impurities; and Lausen was extremely healthy and exempt from fever.

On June 10 one of the peasants of the Furlenthal fell ill with typhoid fever, the source of which was not clearly made out, and passed through a severe attack with relapses, so that he remained ill all the summer; and on July 10 a girl in the same house, and in August a boy, were attacked. Their dejections were certainly, in part, thrown into the Furlenbach; and, moreover, the soil-pit of the privy communicated with the brook. In the middle of July the meadows of the Furlenthal were irrigated as usual for the second hay crop, and within three weeks this was followed by the outbreak of the epidemic at Lausen.

In order to demonstrate the connexion between the water-supply of Lausen and the Furlenbach, the following experiments were performed:—The hole I mentioned above as having on one occasion diverted the Furlenbach into the presumed subterranean channels under the Stockhalder was cleared out, and 18 cwt. of salt were dissolved in water and poured in, and the stream again diverted into it. The next day salt was found in the spring at Lausen. Fifty pounds of wheat flour were then poured into the hole, and the Furlenbach again diverted into it; but the spring at Lausen continued quite clear, and no reaction of starch could be obtained, showing that the water must have found its way under the Stockhalder in part by percolation through the porous strata, and not by distinct channels.

Besides showing the necessity of the introduction of the specific poison in order to render sewage contamination capable of giving rise to typhoid fever, this case is remarkable as an instance of the extreme dilution to which the poison may be subjected without losing its potency, and also the uselessness of irrigation and any ordinary filtration in separating it or rendering it inert. Here the dejections of two cases of typhoid are thrown into a stream; the water of this stream is used to irrigate extensive meadows; a portion of it sinks through the superficial strata, and probably finds its way into subterraneous channels, and passes through a distance of many thousand feet under a mountain, partly, no doubt, by mere percolation; it then takes an insignificant part in feeding one head of a copious spring, which has another head that is not contaminated, and, nevertheless, it gives typhoid fever to 130 persons out of a population of 800. The dilution must have been almost infinitesimal, unless we assume that a multiplication of the poison took place after its discharge from the intestinal canal of the first two cases—possibly in the reservoir at Lausen.

The apparently spontaneous origin of the disease in isolated places may, doubtless, be in part explained by the very long time the poison may lie dormant, still retaining its essential properties, and capable under favourable conditions of developing its activity.

The poison, too, may be introduced in quite unsuspected modes. It is well known that the typhoid poison by no means always produces what is usually recognised as typhoid fever. In very many cases its only effect is to cause some malaise, together with slight intestinal catarrh, which is not necessarily attended by diarrhœa. These cases are only recognised as typhoid when they occur during an epidemic, and among persons who have been exposed to infection; but if we may judge by the analogy of scarlatina, diphtheria, and other contagious fevers, where similar slight unrecognisable forms are not uncommon, these apparently trivial cases should be as potent in communicating the disease as the severe well-marked forms. Hence it is quite possible that the typhoid poison may be introduced into a locality by a person whom no one would suspect of being infected with the disease.

It has been ingeniously suggested by my colleague, Dr. Robert King, that the typhoid poison is derived solely from decomposing albumen, which is not present in healthy stools, and that it can therefore only arise from morbid stools which contain albumen, as is the case in some forms of catarrhal diarrhœa, and he has published a case where the poison seemed to be generated in this manner. This theory might certainly account for long-continued sewage contamination of water without the production of typhoid fever, as the special material from which the typhoid poison is generated might be absent. But it is hardly likely that any such derivative of albumen would remain undecomposed in a drain or cesspool for so long a period as we have reason to believe is the case with the typhoid poison.

We have next to consider how long the typhoid poison can thus retain its activity out of the body in a suitable locality. One of the clearest pieces of evidence on this point is the well-known instance related by Dr. von Gietl. To a village free from typhoid an inhabitant returned suffering from the disease which he had acquired at a distant place. His evacuations were buried in a dunghill. Some weeks later five persons who were employed in removing dung from this heap were attacked by typhoid fever: their alvine discharges were again buried deeply in the same heap, and nine months later one of two men who were employed in the complete removal of the dung was attacked and died. Here we have distinct evidence that the poison retained its powers for nine months.

Dr. Murchison, in his work on Fever, gives an instance in which six cases were spread over a period of eight years. I have recently seen an instance in which an interval of two years occurred without apparently any fresh importation of the poison. Supposing the germ theory to be correct, there is, of course, no reason why the poison should not preserve its vitality, by continuous propagation, for an indefinite time.

On the whole, though the point cannot be regarded as finally determined, I think the weight of evidence is against the *de novo* origin of the disease.

We have now to consider a question about which much difference of opinion still prevails, viz., the contagiousness of typhoid fever. That the disease is communicable from the sick to the healthy is, I believe, universally acknowledged, the point in dispute being the mode in which the transmission takes place, whether directly by emanations from the patient, or from his fresh evacuations, or indirectly from eating or drinking, or inhaling the emanations from the stools, modified by their having undergone some kind of decomposition or fermentation outside the organism. Although the point in dispute is a narrow one, it is of considerable importance, and erroneous views may lead, on the one hand, to the adoption of unnecessary restrictions, which may seriously incommode the patient and his attendants, while at the same time it is only too likely to cause a neglect of the really essential precautions.

I have myself witnessed an outbreak of typhoid where the belief in its contagiousness—shared, I may say, by the medical practitioners—was so strong as to excite quite a panic, so that difficulty was found in procuring attendants for the sick. In consequence, I had on one occasion myself to carry a patient from one room to another, and a man who volunteered to help me was regarded as having done something rather heroic. I need hardly say that, at the same time, the utmost recklessness is commonly shown with regard to the real causes of its dissemination.

On the other hand, a disbelief in the direct contagiousness of the disease might, if not well founded, lead to unnecessary exposure of the patient's friends.

The arguments against the direct contagiousness of the disease are in the main these:—1. In hospitals we rarely find that typhoid fever spreads either to the attendants on the sick or to the other patients. When it does thus spread, persons in other parts of the building, who have never been brought in contact with the typhoid cases, are attacked about as frequently as the immediate attendants themselves.

Dr. Murchison has published the evidence on this point afforded by the London Fever Hospital for a period of twenty-three years, up to 1870. During this period 5988 cases of typhoid were admitted, and seventeen of the resident staff took the disease, but of these seventeen only five were in communication with the typhoid cases, and twelve occurred at a time when there were serious defects in the drains; twelve patients also admitted for other diseases became infected. But since 1861, when the patients were so classified that the typhoid cases and the patients suffering from other acute diseases, not fever, are placed in the same wards, not a single instance has occurred in which the infection has spread to the non-typhoid cases, though the same night-stools and water-closets have been used by both classes of patients, and the use of disinfectants has been exceptional. This shows pretty conclusively that the emanations from the recent stools are not capable of communicating the disease.

Since 1871, 1447 cases of typhoid have been admitted and treated in the same wards with 692 patients suffering from other diseases, and during this time only three nurses and no patients have acquired the disease. On several occasions, however, cases of scarlet fever lying in other wards have become infected. So far as the London Fever Hospital is concerned, it would seem that the risk of becoming infected with typhoid is rather less in the typhoid wards than in other parts of the building.

The experience of other hospitals is for the most part in accordance with that of the London Fever Hospital.

Liebermeister states that up to 1865, neither at Greifswald, nor Tübingen, nor Berlin had a single instance been known of the disease spreading to other patients in the hospital or to the attendants on the sick. The Hôtel-Dieu and La Pitié at Paris, the City of Glasgow Fever Hospital, and the general hospitals of London show much the same results.

During the past year sixty cases of typhoid fever were admitted into the Middlesex Hospital, and six nurses took the disease; but of these six, five were on duty in the surgical wards and never came into contact, directly or indirectly, with the typhoid cases. I need hardly say how unlike this is to the behaviour of a contagious disease. I have no doubt but that in all these six cases the disease was due to the condition of the drains of the dormitory.

It is also found that when persons suffering from typhoid fever are removed to distant places, it is the exception, and not the rule, for the disease to spread; and when it does spread, it quite as commonly attacks persons who have not been brought into immediate contact with the sick, as it does the attendants themselves. It may, I think, be laid down as absolutely certain that an epidemic of typhoid is never caused by the disease spreading by direct contagion, as epidemics of small-pox, scarlatina, and typhus are. On the other hand, it is argued that sometimes, in hospital practice, typhoid does spread to the attendants on the sick or the other patients; and, not at all uncommonly, persons suffering from typhoid, when removed to a distance, do communicate the disease to those brought into contact with them.

Thus, in the hospital at Basle 1900 cases were admitted in six years; and during this period forty-five residents in the hospital became infected, and a large number in addition suffered from a non-febrile intestinal catarrh which in all probability was due to the typhoid poison. But of these forty-five cases many had never been brought into contact with the patients, and of the nurses it was found that those were especially liable to be attacked who occupied a particular room where they were exposed to the emanations from a leaky choked soil-pipe. Probably there is no city in Europe, not even Munich, and no hospital, so saturated with the poison of typhoid as Basle and its hospital; and, moreover, the hospital drains are or were in a very unsatisfactory condition; and thus there is every reason for believing that the contagion in all these forty-five cases was indirect.

The same argument applies to the spread of the disease in private houses. In the great majority of instances where the fever is imported from a distance it does not spread; where it does, some defect in the sanitary conditions favouring indirect contagion can generally be detected: and it is therefore almost certain that the same is the case in the other instances; otherwise we should have to admit that typhoid fever is sometimes contagious and sometimes not—nay, that during the same epidemic the disease is contagious in one house or institution, and not contagious in another house or institution, though they may be situated close together.

I have seen many instances of supposed direct contagion, but have generally succeeded in tracing them to an indirect source.

A boy was admitted into the Middlesex Hospital under my care, on March 27 of last year, suffering from a very severe attack of typhoid. For several days he lay in an unconscious condition, and during this time he had very profuse diarrhœa—twelve to twenty liquid motions daily, which were for the most part passed in the bed. In the next bed was a boy aged six, who had been admitted on April 16, with acute renal dropsy and bloody urine. He was kept strictly confined to bed, and never got up to go to the water-closet down which the motions of the typhoid case were thrown. On May 11, when he was convalescing, the dropsy having disappeared and the albumen much diminished, he was seized by typhoid fever, and passed through a moderately severe attack, with a well-marked rash and characteristic symptoms. This at first sight appeared to be a case of direct contagion, but I have no doubt that the true explanation is this:—The bedding of the first patient was constantly kept saturated by his liquid motions, and, though every care was taken to change the linen frequently, it was obvious, from a distinctly fæcal smell which was always present, that the bedding or mattress remained contaminated, and thus time was given for the poison to develope its infectious properties. Another patient in the same ward, admitted for acute rheumatism, was also attacked by the fever. He occupied a bed on the opposite side, and never came near the first case, but, being convalescent, he used the water-closet down which the motions of the typhoid case were thrown; and it so happened that at this time the closet was out of order, the contents were retained, and an offensive smell was constantly present. Hence, I think, there can be no doubt but that he was infected by the emanations from the evacuations of the first case.

The first case affords an example of a very common mode of infection; and many of the cases attributed to direct contagion are really produced in this way, especially among the lower orders or where skilled nurses are not employed. The bed-linen or mattress, or the patient's own person, become soiled by the liquid alvine discharges. These soon dry, and are left undisturbed, and in a short time the poison developes its infectious properties. Soiled linen is well known to possess very active contagious powers, and to retain them for a long time.

If these views are correct it becomes an important subject of inquiry as to how soon the stools acquire contagious propertics. I am not aware of any observations which would enable us to decide this point with certainty, but the time is probably a very short one. The frequency with which washerwomen have been infected by soiled linen points to a very short duration, as such linen is seldom retained for any length of time. Some facts which have come under my own observation, though not conclusive, are also in favour of the period being very short.

At the Middlesex Hospital it was formerly the custom to preserve the stools of cases of typhoid, which the physician wished to inspect, in pans which were placed in the water-closets of the wards. Now, the time during which such stools would be so kept would hardly ever exceed twelve hours; nevertheless, several instances have occurred in which other patients using these closets have become infected. Supposing the cause of the infection to have been these reserved stools, we should have a period of not longer than twelve hours for the contagious properties to become developed. The experience of the London Fever Hospital pretty conclusively proves that the fresh stools are innocuous.

The practical conclusion to be drawn is, I think, this: that we have in all cases a few hours during which it lies in our power to render the poison innocuous, and to prevent the spread of the disease by direct infection.

(*To be continued.*)

ORIGINAL COMMUNICATIONS.

THE PATHOLOGIES OF CHOREA IN THEIR APPLICATION.

By OCTAVIUS STURGES, M.D.,
Physician to the Westminster Hospital, etc.

(*Continued from page* 259.)

Other illustrations might be given of the failure of all attempted explanations of chorea so soon as they reach the anatomical stage. Thus Dr. Hughlings-Jackson supposes that "the excessive movements either in chorea, in epilepsy or epileptiform seizures are produced by discharges of grey matter which except for great instability from over-nutrition is healthy." He forms the hypothesis that these excessive discharges immediately depend upon an increased quantity of blood in the periphery of a capillary district which is embolised.

With the now familiar doctrine of accumulation and discharge we are not at present concerned. It is obvious to remark, however, in passing that it is only by the use of very flexible expressions that the same explanation can be made to serve both for chorea and epilepsy. The explosive discharge by means of involuntary spasm which is epilepsy is quite different from that continuous restlessness of the higher muscles which is without spasm, which is not wholly involuntary, which never occurs in sleep or without consciousness (and indeed intelligence), which no manipulation can produce, which is almost unknown with certain races of mankind and never seen in the lower animals. But our concern now is with the actual physical change upon which irregularity of discharge may be supposed to depend, increased access of blood, namely, to a district which is embolised, but otherwise healthy. Will such a condition really account for the phenomena?

I think, on the contrary, that we may refer once more to all that we know of cerebral embolism as well as to all that we know of cerebral hyperæmia to negative any such view. The hypothesis supposes, as the character of choreic movement requires, healthy grey matter. But our knowledge gives, as a speedy result of embolism, grey matter disintegrated and soon softening. Allowing therefore that this form of embolism would give rise to chorea first, it would give rise to paresis afterwards. Chorea would not be the recovering disorder which we see, it would be intimately allied with paralysis. Else the hypothesis which provides embolism as the cause of chorea must provide something besides which shall presently dispose of such embolism. But, further, given this over-nutrition, upon what ground is the hypothesis based that hyperæmia of grey matter will give chorea at all? Our actual knowledge of this condition, such as it is, gives us mental rather than motor phenomena, and convulsive rather than irregular or half voluntary movement. In the many forms of intracranial growth, syphilitic, tubercular and sarcomatous, in aneurism, in meningitis, in the changes which precede softening, in the reparative processes after hæmorrhage, a localised hyperæmia of grey matter may be assumed to arise at some time or other. The symptoms of these several conditions, as is well known, present the greatest variety. They include almost every kind of nervous disturbance except chorea: spasm, whether tonic or clonic, "limited to the distribution of a single motor nerve or implicating a group of muscles on one side of the body," emotional disorders resembling hysteria so closely as to be often mistaken for it, incoherence, mania, delirium, obstinate vomiting, acute pain, aphasia, but never (or hardly ever)(a) chorea. Especially is it to be remarked in the case of meningitis, a disease which both involves hyperæmia of grey matter and has children for its favourite subjects, that with all the variety in its mode of onset (coinciding probably with a corresponding variety in the order of sequence of the morbid changes) chorea has no place. There is nothing more remarkable, I think, in the general conduct of chorea than the way in which it keeps itself separate, not only from all the cerebral diseases which imply trophic change, but from all active disease whatever.

3. And it may be contended generally, not merely that all the morbid conditions hitherto described fail to account for the phenomena of chorea, but further that it is difficult to conceive of any morbid condition whatever, anatomically demonstrable, which is at all calculated to produce it. We have seen already by what course of reasoning the locality of the chorea-change has been referred to the convolutions. But, if this be allowed, by what further supposition can any material defect of a tangible kind (more distinct and demonstrable, that is to say, than mal-nutrition or trophic disturbance) be assigned to this region as provocative of this particular disorder? Look again at the actual facts, look especially at the points in which the chorea of every day differs from the chorea that is really wanted to satisfy anatomical theories. The brain cortex has been injured and irritated by disease and experiment in a great variety of ways. It may be assumed that every kind of response of which it is capable has been elicited from it. It has been shown by the experiments of Dr. Ferrier and others that certain defined areas of the cerebral hemispheres have special endowments, insomuch that their stimulation is followed by particular movements or groups of movements. Thus we get complex movements of the several limbs like those of climbing or swimming or walking, extension movement of the hand and arm, the combined movement of head, eyes and pupils which gives the attitude of surprise and so on, each of these movements being, so to speak, under command and producible always so long as the particular centre is structurally uninjured. And, moreover, these several centres of movement being all near together, and all included in that area of the brain which is in relation through the corpus striatum with the motor tract, movements of these various parts are apt to be variously conjoined, or the one kind of movement to precede or follow the other just as the stimulation of one centre gets communicated to the next. From movements of a precise and definite kind which result from the earliest stimulation of a particular motor centre we pass on to a corresponding spasm and from that to a paresis, these gradations corresponding with increased irritation and the production eventually of structural injury. It must be added that the earliest of these results, that of combined movement, is chiefly known to us in experiment while the later consequences, spasm and paresis, are amply illustrated in cerebral disease.

Now suppose some lesion or other of an irritative kind affecting the convolutions to be so situated as to concern some one or other or some group of these motor centres. Upon the foregoing data what consequence might be reasonably expected to happen? Surely that the earliest impression of such irritation should be seen in some definite muscular movement, or in a combination of movements corresponding with the propinquity and relative position of the several motor centres, the leg and lower part of the face suffering with the arm, the head and neck with the eyes so as to give a particular expression, and so on. Or if the irritation were limited to one centre we should expect (arguing from every irritation of the kind that we know of) that it would at length produce spasm and paresis: that we should have for this particular motor centre at first extravagant movement strictly localised, presently spasm or tremor of increasing violence and at last paralysis just as the central deterioration proceeded.

How far do the facts of chorea correspond with such expectation? I have already alluded to the anomalous and irregular manner in which the several parts of the body are implicated, the most sensitive and intelligent muscles being the most liable to attack, but what is more noteworthy still is the character of the movements. Chorea is not overmovement in the sense that there is excess in any combined muscular act, or exaggeration of any bodily expression. Still less is it spasm. Choreic muscles are restless and jerky and indeliberate, they combine so badly that the intention of particular movements, whether of the tongue or the limbs, is not apparent, while so far as the special muscles of expression are concerned it is not the look of surprise that we see or of any other emotion but mere vacancy. Chorea is, in fact, not absolute but relative disorder. The movement which is proper to the child would be accounted chorea in the man or woman. The movement which is proper and convenient for one limb or feature would be chorea in another. Nay more, the movement which we learn to accept

(a) I make this reservation in view of those individuals who have already suffered chorea in childhood and with whom, as is well known, many provocations, and cerebral disease amongst the rest, will serve sometimes to revive the same affection. See clinical lecture "On a Case of Chorea," *Lancet*, September 6, 1880.

from one man we should call choreic in another. True such examples as these fail to represent extreme chorea, but it is not extreme chorea that we at present want but the common *method* of the disorder.

But as regards severe chorea. Not only do we but rarely see the muscles selected for chorea in the way that they should be supposing a particular motor centre or contiguous centres to be irritated, but further we absolutely never see a chorea which is thus strictly limited becoming aggravated to severe spasm without the rest of the muscles becoming implicated. There is no such thing as a localised chorea reaching a point of violence without the concurrence of the rest of the muscles. Violent chorea (or as it is sometimes called "acute" chorea) is always general.

But there is another element of chorea much insisted on by those who are in search for its physical basis, namely, ataxy. Here again we have but to watch the thing itself to see at once how this word fails to apply to chorea in the same sense as it applies to the progressive disease which depends upon degenerative changes in the cord. We err from accepting a too vague and general description of the disorder. I take an example of chorea of some severity at present before me, the subject being an intelligent girl of twelve. Ataxy is very marked in this patient, but it is in the arms and speech muscles and not in the legs. When directed to clap her hands together she moves the two arms with a jerk but in such manner as not only to fail of her purpose but to conceal the existence of any purpose whatever. And the more so that there is no deliberate direction of the eyes towards the arms or to the place where the hands should meet. The movement is sudden and reckless and wholly abortive. So it is in the next attempt and the next. At last however by a sudden jerk, as if resolving to anticipate the perverted working of more deliberate will, the act is performed perfectly, the palms meeting quite accurately, while with this unexpected success subsequent movements of a similar kind are much improved. Everyone will admit the contrast between this and progressive ataxia. The cautious and painful way in which an ataxic sets about any combined movement, the careful manner in which with the help of the eyes the hands are moved towards one another yet just fail to meet or meet by a happy chance, not fully, as in the other case, but with their sides touching, all this is as characteristic of the disease as is its progressive character, preference for the lower extremities, and limitation almost to adult males. Add to this (if more needs to be added) that the ill consensus of choreic muscles is a very variable and intermittent affection. In the case just mentioned with the confidence of success the arms very quickly regained their right use. Upon a mental disquiet however (occasioned by an incautious comparison of her complaint, in the girl's hearing, with demoniacal possession) the ataxy returned temporarily together with the full violence of the original disorder, and such extreme difficulty in mastication and deglutition that for some twenty-four hours she could hardly be got to swallow. All these symptoms however subsided in the course of a day or two with the quieting of the mind and the girl is now absolutely steady.

I should be content almost to rest the whole case upon one such example as this, upon *any* example indeed in which the cause and course and termination and exact manner of chorea are faithfully and fully set down. If morbid anatomy will serve at one point it will fail upon a complete review and can only be maintained by having regard to certain isolated symptoms at a particular period of their development.

(To be concluded.)

ON THE VENTILATION OF SEWERS.

By JAMES STARK, M.D., F.R.S.E.,
Late Superintendent of Medical Statistics for Scotland.

The most wild notions at present exist as to the ventilation of sewers, and a system of ventilation has been adopted in some towns which virtually reduces all the covered sewers into open drains, and fills the streets with the disgusting sewer-gases, the breathing of which is so hurtful to human health. It is therefore absolutely necessary that the subject should be thoroughly ventilated in the medical journals, that the architects and engineers employed by town councils may not convert our towns and villages into disgusting pest-houses and cities of the plague. For at least forty years I have paid special attention to all those branches of knowledge which throw light on sanitary science, have written much regarding it, and published an "Inquiry into the Sanitary State of Edinburgh" in 1847. I cannot, therefore, be considered entirely ignorant of the subject on which I now write.

Before we inquire *how* sewers ought to be ventilated, we must first decide *whether* sewers ought to be ventilated at all. I have not yet seen one single plea for the ventilation of sewers which would bear examination by the light of science; and the whole of the sciences which bear on this subject, viz., chemistry, medicine, sanitation, botany, biology, and even the half-mechanical sciences, pneumatics and hydraulics, with a unanimous testimony which is overwhelming, proclaim that sewers ought *not* to be ventilated. On the other hand, they individually and collectively teach by facts, which they have proved to be truths, that every mechanical appliance should be put into operation to prevent the fœtid, poisonous sewer-gases escaping from the drains, and mixing with the air which is breathed by human beings.

It has been proved, beyond dispute, that breathing the noxious gases which arise from decomposing animal and vegetable matters is not only highly prejudicial to the general health, but, according to the season, climate, or meteorological condition of the air, produces actual disease, and even devastating epidemics. Thus, such vapours in warm countries give rise to plague, yellow fever, dysentery, agues, tertian and quartan fevers, diarrhœa, cholera, etc.; while in our own country they have been proved again and again to produce typhoid and typhus fevers, scarlatina, diphtheria, and many other diseases. By a wise law of nature most of these putrescent gases which are hurtful to health have a disgustingly fœtid odour, so that man has distinct warning of their presence; and true science, recognising this, uses every mechanical aid it can to prevent the gases which result from decomposition being breathed by human beings. Accordingly, that branch of science styled the "sanitary" covers over all open ditches which receive sewerage, and traps every aperture which communicates with the main drain, to prevent the noxious sewer-gases escaping them and being breathed by the people.

The defenders of open sewage ventilation, however, recognising none of these facts, or being ignorant of them, virtually convert the covered sewers into open ditches by placing ventilating apertures more than a foot square directly over and into the covered sewers at about every hundred feet from one another. The street in which these apertures are placed is therefore constantly kept disgustingly fœtid with the sewer-vapours escaping at these apertures; and instead of the people breathing pure air, they are breathing air full of the disgusting, disease-giving sewer-gases.

But the defenders of sewer ventilation assert, of course without proof, that ventilating sewers diminishes the formation of dangerous vapours, and dilutes or neutralises them by a process which they term oxygenation. Let us look at facts proved to be truths by the science of chemistry, and we shall find that their assertions are untruths, and that ventilating of sewers increases the rapidity of decomposition of the sewer-water, and renders the noxious sewer-vapours ten times more abundant.

Decomposition of animal and vegetable matters (and both exist in sewer-water) can only occur when they come in contact with the oxygen which exists in the air. Seal up, therefore, vegetable or animal matters (as is done in our preserved meat and vegetable tins) so that the oxygen of the air does not get access to them, and they will keep unchanged for years; but admit atmospheric air, and they decay immediately. If no air were admitted to our sewers, the sewage could be passed through hundreds of miles of piping, and be as free from decomposition at the end of its course as at the beginning. But the pipes and drains are made much larger than is necessary, and the sewage-water generally only occupies the bottom of the drain, so the rest of the drain becomes filled with air. The oxygen in this air attacks the vegetable and animal matters in the sewage, and causes them to decompose, that is, it causes them to form new chemical combinations of which poisonous sewer-gases are one of the results. The true sanitarian, knowing this to be the effect of the oxygen in the air, uses every known

mechanical means to let as little oxygen as possible get into the drains, as he knows well that the more fresh air he lets into the sewer, the more rapid will be the decomposition of the sewer-water, and the greater will be the amount of noxious gases evolved. He therefore traps every aperture which could furnish a fresh supply of air, whether that aperture be within the house, or in the gutter of the street; and this trap has the doubly beneficial effect of limiting the supply of air which causes decomposition, and of preventing the noxious gases formed in the drain from getting access either to the house or the street. The defenders of the ventilation of drains, forgetting all these proved facts, put ventilators which pour in a constant supply of fresh air, the oxygen of which causes the sewer-water to decompose rapidly, and, of course, evolve ten times as much noxious sewer-gas as it would have done had the drains been thoroughly trapped. Ventilation of drains, therefore, is a blundering mistake, opposed to the teaching of science.

As knowledge of the world around us improves, it becomes more and more apparent that many of the fatal epidemic diseases, to which plants and animals are subject, are caused by microscopic fungi—which, in common parlance, would be termed different kinds of mould, as seen on decaying cheese. These are propagated by their seeds, called sporidia by botanists, and they are so minute as only to be detected by a powerful microscope, and so buoyant that they float everywhere in the air. The potato disease, the coffee blight, rust in wheat, oats, and barley, and ergot in rye, are notable instances of epidemics in vegetables caused by fungi; and the salmon disease, and, in the human race, a large proportion of the skin diseases—aphthæ, typhoid fever, dysentery, cholera, and it is even suspected consumption itself, the scourge of our race,—have already been proved to be caused by various forms of fungi or mould. In fact, the seeds of these fungi take root and germinate wherever they find a proper nidus; and mankind owe a deep debt of gratitude to Professor Lister for having proved that sores on the human body were prevented from healing in consequence of the sporidia of these fungi germinating on the sores. Hence the value of his antiseptic treatment, which, by using a wash fatal to vegetation, prevents these sporidia from germinating on the sore, and kill the fungus if present.

Now, these fungi grow wherever there is heat, air, and moisture; and as they find all these requisites in the sewers, they abound in many varied forms there; and as they are all the year round at nearly a uniform temperature, they perfect their seeds all the year, and keep the air in the sewers continually filled with their floating invisible seeds or sporidia. The man of science, knowing the danger of inducing disease in man if he allows the seeds of these fungi to be breathed or come in contact with the body, uses every mechanical appliance to confine to the sewers the foul sewer-gases which are filled with these disease- and death-giving sporidia. But the defenders of the ventilation of sewers, ignoring these proved facts, put in ventilators, which, by furnishing a better supply of oxygen, increase by tenfold the quantity of seed perfected by these fungi; and by these ventilators force every person passing along the street to breathe the sewer-vapours filled with these death-giving sporidia. They thus do everything in their power to court disease in order to carry out a pet theory they have adopted—a theory which runs counter to all the proved facts of science.

But an objection must be answered. The defenders of sewer ventilation think they prove its necessity by finding that ventilating apertures beneath the floors of houses prevent the wooden beams from dry-rot, which is caused by a fungus. The two cases have not the slightest analogy, as every biologist and botanist could have informed them. The seeds of the fungi which cause dry-rot are floating in the air, like those of the other destructive fungi, but if the beam contains no moisture the sporidia cannot germinate, so no fungus is produced. But if the beam contains moisture from being imperfectly seasoned before being built into the wall, or if its surface attracts damp from the ground on which the house stands, the sporidia immediately germinate, because they find the three requisites of germination—moderate heat, air, and moisture. In such a case free ventilation of the space below the beam would prevent the sporidia from germinating, not by the oxygen of the air "destroying" the sporidia, as ignorantly imagined, for the germination of all seeds can only take place through the agency of oxygen, but because the ventilators produce a current of air which keeps the surface of the wood dry. As air and heat by themselves will not germinate seeds, and as the necessary moisture is wanting, the sporidia do not germinate, and the ventilated beam escapes dry-rot. Ventilation of sewers, however, has the very opposite effect, for, as they have the three essential elements of germination, an additional supply of fresh air only increases the germination of the sporidia, and aids the fungus to develope ten times as many seeds as it could do when the supply of air was limited.

Lastly, the open ventilation of sewers, instead of preventing the foul sewer-gases being sucked or driven into the dwellings, as the supporters of sewer ventilation ignorantly imagine, is the surest means of forcing the deadly sewer-gases into the houses, as a very superficial knowledge of pneumatics and hydraulics proves.

If the sewers were closed by perfect traps, whenever a fall of rain occurred sufficient to flush the sewers a powerful suction power would be exerted by the moving water, and the whole foul air in the drains of the houses supplying pipes to the sewer would be sucked into the main sewer. If, however, a ventilating aperture were put into the main drain in the street, this salutary clearing of the house-drains would be stopped: so that ventilators to drains do positive harm.

But putting open ventilating apertures to the main drain, instead of preventing the sewer-gases from entering the houses, is the surest means of forcing these gases into the houses. A very trifling knowledge of science proves this. This is a windy climate, and for two or three days every week the wind blows with a pressure of from four to eight pounds on every square foot of surface. In the strong winds and squalls, which occur about once a week during the winter months, the pressure of the wind varies from eight to thirty pounds on every square foot. Let us apply this known fact to the open ventilation of sewers. The interiors of the houses are not exposed to the current of wind, and consequently do not experience this increase of pressure; but the open ventilators of the drains allow this extra pressure to be communicated to the air in the main drains, and every gust of wind forces the shallow traps of the house-drains, and pours a stream of foul sewer-gas into the houses.

It is thus seen, from this lengthened examination, that well-known and proved facts, furnished by all the varied sciences which bear in any way on the ventilation of sewers, condemn their ventilation as a violation of all their established principles: that ventilation makes the gaseous vapours which escape from the sewers ten times more dangerous to human life than if the sewers had been thoroughly trapped: in fact, that ventilation of the sewers virtually converts the covered sewer into an open drain filled with decomposing sewage; and the deadly effects of such drains on the health of the people requires no pen of mine to make known to the public.

Portobello.

KANGAROO LIGATURES.—Mr. Girdlestone read a paper at the Australian Medical Society (*Australian Medical Journal*, December), in which he confirmed by means of additional experience the statement made in a paper read in 1877 that ligatures made from carbolised tendon of the kangaroo's tail are of great value for tying vessels of even the largest calibre, being stronger, more durable, than catgut ligatures, and capable of being used without fear of the tendon breaking or the knot slipping. In experiments the tendon was found, ten days after death, incorporated in a little band of areolar tissue, which was surrounded by, and was adherent to, the outer coat of the vessel, the inner and middle coats being divided and the artery occluded. The ligature possesses all the valuable qualities of catgut without having any of its defects. These ligatures have been frequently used in the Melbourne Hospital as ligatures and sutures. In plastic operations and in varicocele the results of their employment are very satisfactory. The tendons of a fresh tail are most carefully removed, without splitting or otherwise damaging them, and after soaking for two hours in cold water, and then another hour in carbolised water (one to forty), are dried. They are afterwards prepared for use exactly as Professor Lister recommends for catgut carbolised ligatures; and immediately before employing them they must be steeped for several hours in carbolic acid water in order to render them soft enough for tying good knots.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET.

CASES OF THE CHRONIC TETANOID CONVULSION OF CHILDHOOD—SUCCESSFUL TREATMENT BY CALABAR BEAN.

(Under the care of Dr. CHEADLE.)

Introductory Remarks by Dr. Cheadle.—The tetany of Corvisart and Trousseau, observed first and chiefly in nursing mothers, is stated to occur also in certain other conditions of adult life, and in childhood. But the tetanoid convulsion as we see it in children differs in several important features from the disorder described by the French physicians. The very names at one time given to the disease—"intermittent tetanus," "intermittent rheumatic contraction"—point to one essential difference. The tonic spasm was not persistent, but passed off in the course of a few minutes, or at the most in the course of a few hours, returning again at varying intervals. In the tetany of childhood the spasm is persistent—the carpo-pedal contractions do not pass off, although there may be some variation of intensity, and fits of convulsion may occur from time to time. There are, moreover, certain other conditions indicated by Trousseau as distinctive of the disorder, which were wanting in the instance here recorded. What these were will be more easily explained after a description of the cases which form the text of these remarks, for the excellent notes of which I am indebted to the Registrar, Dr. Abercrombie.

Case 1.—Henry W., a child of two years, was admitted into the Hospital for Sick Children on January 21, 1879. The account given of him was that he had been perfectly well until March, when he had a fit, followed by persistent carpo-pedal contractions, which passed off in about fourteen days. Remained well until Christmas-eve, when he had a slight fit. The face convulsed; arms flexed and twisted behind the back; legs drawn up and rigid; with loss of consciousness lasting half an hour. All that night the child seemed in great pain and got no sleep. The next day his face was noticed to be swollen and red, and he could not open his right eye, while he squinted with the left, but not constantly. These latter symptoms passed off in a week; but the feet and hands have remained contracted, and the child has had difficulty in swallowing fluids, although none with solids. During the last week the fingers have become somewhat relaxed; but the toes remain drawn in, and the feet arched as before. Born at full time. No snuffles or rash. Eight other children; six healthy; one died of convulsions; one an hour after birth. Mother no miscarriages. This child was weaned at twelve months, at which time he began to walk, but he cannot walk fairly yet. After a fortnight old he was given bread-and-milk and corn-flour in addition to the breast. The mother has often noticed that he perspired profusely about the head during sleep. The father and mother are said to be healthy, but the paternal grandfather died of tetanus (traumatic?); the maternal grandfather insane.

Condition of the Patient on admission.—The child is plump and well nourished; the head rather large and square, the anterior fontanelle closed. There is no discharge from the ears; no strabismus or ptosis or facial paralysis. Pupils large, equal, sluggish. Tongue clean. Has got all his teeth except the canines. No difficulty in swallowing fluids. Glands on left side of neck slightly enlarged. Chest normal, except base rather broad and the ribs beaded; pulmonary and cardiac sounds normal. Abdomen: Organs natural; glands in groin not enlarged. The prepuce is long, but the orifice is not tight. Temperature subnormal, 97°. Urine free from albumen. The bowels had been open twice since admission; the first motion loose, but not offensive. The child is in a state of tonic persistent carpo-pedal contraction. The hand is flexed at the wrist and slightly adducted, the thumb so strongly adducted that the ball of the thumb is applied to the palm of the hand; it is slightly flexed, the fingers extended, the last phalanx being slightly flexed, while the second joint is extended beyond the straight line. The feet are slightly flexed and a little abducted; the great toes are very little flexed. No spasm of the masseters or temporals, no stiffness of jaw or neck or tendency to opisthotonos observable. The muscles of the calves and the peronei can be felt to be very firm, and the same may be said of the muscles of the forearm; but there is such a marked tendency for the muscles to become rigid on manipulation that it is difficult to ascertain their normal condition. The muscles of the neck, pectorals, and muscles of abdomen likewise become very rigid on handling. When left to himself the child turns over and lies on his knees and face.

Two grains of chloral hydrate and five of bromide of potassium were ordered to be given every four hours, beginning with a double dose forthwith. In three days the treatment had produced no appreciable result; the child was drowsy, and the pupils contracted, but the hands were rather more adducted, the ring and little fingers being a little separated from the others. The nurse thinks he swallows semi-solid food better than fluids; for when drinking he has to make several gulps in swallowing each mouthful. Reflex excitability on tickling the soles of the feet is about natural. Sensation seems unaffected. The temperature remains subnormal (96·8° to 97·8°). The bowels have been open once daily; the motions fairly natural. It is observed that there is no relaxation of rigidity of the hands and feet during sleep. Chloroform was given, and the child kept fully under its influence for half an hour—so deeply, indeed, that he did not feel a very strong continuous current,—yet, there was no relaxation of the tonic spasm. Tested with the continuous current, the flexors of the hands respond to eight cells, and the adductor pollicis likewise; the extensors require eleven cells. Both hands are alike. The treatment was now changed by increasing the bromide to ten grains every four hours, the chloral being omitted. When examined after this plan had been followed for three days, there appeared to be no material change in his condition—the child clearly had some difficulty in swallowing fluids, which caused cough, and semi-fluids were more easily taken. It was observed that the muscles of the face were in a state of abnormal excitability, for on passing the finger roughly over the skin just in front of the left parotid region, the orbicularis palpebrarum, the levator alæ nasi, and levator anguli oris twitch smartly. This twitching can also be produced in the same way on the right side, but it is not so marked as on the left. The treatment was continued nine days longer—*i.e.*, until February 5,—the bromide being given in bismuth mixture on account of a little diarrhœa. There was certainly no satisfactory improvement at the end of this time. The hands at times were a little relaxed, so that he could occasionally grasp a piece of bread-and-butter, but this was not continuous. Attacks of laryngismus came on now and again, both during sleep and when awake. Once there was "squinting." On the whole, he swallowed with more difficulty than before; sometimes he could drink several mouthfuls in succession; at others could hardly get anything down after many gulps. The excitability of the facial muscles continued, and the carpo-pedal contractions showed no sign of relaxation. The only point in which the child seemed better was that the muscles did not become so rigid on handling, and the diarrhœa was relieved. The hand was immersed in warm water for some minutes, but no relaxation of muscle followed. An Esmarch's bandage placed firmly round the right upper arm for upwards of one minute produced no effect either during the time of its application or afterwards. Compression of the left ulnar nerve does not exercise any influence over the spasms, which cannot be exaggerated to the clonic convulsive form by any manipulation. Chloroform was again given, without any effect upon the contracted muscles. The muscles were also tested again by galvanism, with the following result:—

Leclanché Battery, Continued Current.

Peronei	left, 25 cells;	right, 11 cells.
Extensors	„ 20 „	„ 11 „
Gastrocnemii	„ 17 „	„ 11 „

Stöhrer's Battery, Induced Current.

Peronei	left, 14 cells;	right, 13 cells.
Extensors	„ 14 „	„ 14 „
Gastrocnemii	„ 14 „	„ 13 „

In the face, with a constant current, one pole being placed

over the point of emergence of the left facial nerve in front of the ear, and the other over the cheek, the muscles responded to eleven cells (right not noted). There being no improvement under treatment by bromide of potassium, which had now been thoroughly tried (ten grains having been given every four hours since January 25, or a period of twelve days), it was decided to bring the patient fully under the influence of Calabar bean. A dose of one thirty-sixth of a grain of the extract was given at first three times a-day, increased at intervals of a few days to one twenty-fourth, one-sixteenth, one-twelfth, and one-eighth. He was also given cod-liver oil and steel wine. No result was obtained until the latter dose was reached, on February 15; and by the 17th the fingers were noticed to be less stiff, more easily flexed on the metacarpus, and the over-extension of the joints was less marked. Moreover, the child swallowed better, but the attacks of laryngismus were still at times severe. Two days later (February 19) the dose was increased to one-sixth of a grain; on the 22nd he was placed on a diet of raw meat; and on the 24th a very decided change for the better had become established—the fingers were almost natural; the thumb still adducted, but less strongly; the wrist slightly flexed and adducted; the toes still flexed, but less rigidly. The attacks of laryngismus were less frequent, and the child could swallow without difficulty. His appetite was good. The facial irritability had disappeared. The temperature continued to range between 96° and 97·8°, having only once exceeded 98° since admission (98·9°). On March 1 the dose was increased to one-fifth of a grain; and on the 3rd the report was of still greater improvement—there had been no laryngismus for a week. The spasm of the hands had almost completely relaxed, the left wrist only being slightly flexed, and the thumb a little adducted; the toes, however, remained slightly flexed. The bowels were still a little loose, but open only once daily. The dose was still further increased to one-quarter and finally to one-third of a grain three times a day; and by the 15th the boy was quite well, every trace of muscular irritability and spasm having vanished. For the first time the temperature went up to 100·4° in the evening; but this lasted only a few days, and seemed to be due to a slight catarrh. The dose of physostigma was now gradually reduced until the remedy was altogether omitted. There was no return of the symptoms, and at the end of the month the boy was discharged quite well.

Note.—A few weeks later the child was readmitted in the same tetanoid condition as before. Unfortunately a severe outbreak of measles occurred in the hospital, when this patient contracted the disease, and died of it.

(*To be concluded.*)

"Overworked Schoolboys."—Under this title the *Australian Medical Journal* (December) contains an article protesting against the practice which prevails in Victoria of forcing on schoolboys by prolonged study. Every State-school pupil has four hours' daily lessons, and has to spend quite half that time in preparation; whilst those who take up extra subjects for matriculation average, for many months, at least twelve hours' daily high-tension exercise of the brain. "At the colleges and grammar-schools (public and private) the class and study hours are at least twice too long, with the inevitable consequence that a rapid physical, which connotes mental, degeneration is visible in our present young generation. Only half a generation ago, when the Melbourne University had not one-sixth of its present number of undergraduates, its rowing-club was the head of the river; its football players and cricketers were among our very best; whilst latterly, year by year, its members have become remarkable for their inaptness at field sports, and a comparison of the physique of the earlier with the later undergraduates will sufficiently explain the anomaly. We insist, then, that the hours of study in State-schools, in grammar-schools and colleges, and in the University—though there decidedly less so—are far too long, and that the principle of forcing youths at so early an age as fifteen into the University must result in that physical degeneracy which is the unfailing consequence of early over-competitive study, and that this degeneracy is the forerunner of a short-lived, feeble, sickly posterity."

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Medical Times and Gazette.

SATURDAY, MARCH 13, 1880.

THE WATER BILL.

Practically, we suspect, we have seen, if not heard, the last of Mr. Cross's unfortunate Water Bill. Few had any idea of the immense sums which had to be dealt with in any such scheme, and when they saw them in figures they were already half-frightened. But the chief misfortune, as it seems to us, as regards the Bill, was the time when and manner in which it was introduced. As to time, it was brought on somewhere in the small hours in the morning; and as to manner, Mr. Cross, usually singularly clear in his statements, was too hurried to do justice either to his subject or his meaning. He has since made it clear that his object in introducing the measure at all was simply to mature a scheme for mutual agreement on the part of the water companies and the ratepayers. He had ascertained that the water companies were unwilling to sell at a lower figure, but it did not follow that the ratepayers would be compelled to take over the works at that sum except they pleased to do so. "They might take it or leave it,"—he had done his best to reduce the demands of the water companies, and as regards monetary matters he could do no more. Any other modifications he was ready to accept. Mr. Cross thus put himself in the position of a middle-man, with all its attached pains and penalties. One side he might not please by giving less than the companies demanded, even though they drove a pretty hard bargain; on the other he was bound to dissatisfy the public, in presenting them with their already overgrown burdens in a concentrated form. There would be, in addition, a sure prospect of further demands for money at indefinite intervals—the first certainly at no far distant date; for we cannot imagine any new water scheme perfect without a constant supply and improved provision for fire. But has anyone endeavoured to calculate the cost of this? Our pipes and taps will not stand the

heavy pressure demanded for a constant supply, without renewal, and this addition to the original cost, though it would not appear in the rate-book, would be far from small to each individual owner or occupier, and in the aggregate would be tremendous.

Not less is the misfortune, as regards Mr. Cross's Bill, that it has been seized upon as an abortive Government measure upon which they have dissolved Parliament—for that is the plain way of putting the manifesto of Lord Hartington as regards it; and thus the Ministry itself has to suffer through Mr. Cross having consented to play the part of Sheridan's "good-natured friend." It was plain at the outset that such a stupendous measure could not be thoroughly well undertaken at the fag-end of a Parliament, and in the face of what people cannot help feeling the manifest injustice of a rigged market. In a new Parliament, fresh and vigorous, we may hope to find a body strong enough and stout enough to pass a Bill enabling the Water Trust to take over the stock-in-trade of the present bodies at a reasonable valuation. Only we hope that if Mr. Cross tries his hand again at any such scheme he will make himself clearly understood, and will, above all, take the matter strongly in hand from the first. Facts and figures he must now have fairly before him.

THE SELECT COMMITTEE ON MEDICAL REFORM: EVIDENCE OF PROFESSORS STRUTHERS AND GAIRDNER.

Our readers will find in another column a detailed report of the evidence brought before the Select Committee of the House of Commons on Medical Reform by the two witnesses examined on Monday last, the 8th inst. That was the only day on which witnesses have been before the Committee since its re-appointment this session; and as it is now impossible for the Committee to complete its labours before the dissolution of Parliament, we understand that it has been decided that no more witnesses be called at present. The Committee meets to-day (Friday), we believe, for the purpose of drawing up a formal report, presenting the evidence obtained on Monday, and suggesting the re-appointment of a Committee in the new Parliament for the further prosecution of the inquiry, for the consideration of the evidence adduced, and for reporting the conclusions arrived at as the result of the protracted investigation. We here give, in conformity with our practice during the last Parliamentary session, an abstract of the evidence of the two witnesses examined on Monday last.

It is unnecessary to remind our readers that the Scotch universities and corporations have all along been the determined opponents of the English Conjoint Scheme, and the reasons for their opposition, differing as they do somewhat for the universities and for the corporations, have always seemed to us to be well founded. Professor Struthers of Aberdeen, and Dr. Gairdner of Glasgow, the two witnesses of Monday, gave evidence very similar to that furnished last session by Professor Turner of Edinburgh; and the answers of these three gentlemen must be taken as representing the whole case of the Scotch universities. It is not unnecessary to remark, for the benefit of many of our readers, that the three universities named—viz., Edinburgh, Aberdeen, and Glasgow—hold practically the very same relationship to the medical profession. The teaching and curriculum of medical study at these three universities, the examinations to be undergone, and the degrees conferred, are now, and have been for the last twenty years, quite similar, being regulated in accordance with the provisions of an Act of Parliament passed in 1858. The fourth Scotch university, that of St. Andrews, in its relations to the medical profession is very differently placed from the other three, inasmuch as it has no medical school attached. Its chief connexion with the medical profession is due to the fact that it has for each year the power of conferring—after examination, but of course without residence—the degree of M.D. on ten medical practitioners of fourteen years' standing. The necessity for the explanation of this difference, as regards their medical relations, between the three chief Scotch universities and St. Andrews was made painfully evident on Monday last by some of the questions of members of the Select Committee, who evidently were not aware of the medical reforms accomplished in the Scotch universities by their Act of 1858. The above statement also explains, of course, why the delegates of the Aberdeen and Glasgow Universities should give evidence so similar to that given by Professor Turner on behalf of Edinburgh University. The fact that it was so similar will also allow us to be content with a brief summary.

The Professor of Anatomy at the University of Aberdeen pointed out that two evils were connected with most corporation qualifications—first, that they were only single or half qualifications, and thus deceived the public, as they were singly sufficient for registration; and secondly, that those who wished to obtain double corporation licences had in most cases to undergo the trouble and expense of going to different examining boards to get it. But these objections did not apply at all to the three Scotch universities, as they examined in all departments of practice, and granted both medical and surgical diplomas. Moreover, the teaching and examination in the Scotch universities were above the standard that could be generally enforced by a Conjoint Board scheme. He thought, therefore, that all real objections to the present system of things could be best removed without interfering with the universities at all, by the law requiring in every case a complete examination in all departments of practice before registration, and by the institution for that purpose of conjoint examinations by the Colleges of Physicians and Surgeons in the three divisions of the kingdom, as was already the practice of the Scotch corporations. The only concession he would make on behalf of the universities would be that Conjoint Board examiners might attend the examinations; but he was strongly opposed to all schemes that would impose upon their university students the trouble and expense of going elsewhere to pass a Conjoint Board examination, and that too of a standard inferior to their own. Such a necessity would inevitably tend to lower the standard of medical education in Scotland, for many students would be content with the Conjoint Board examination if it were made compulsory, and would not seek the higher (university) degrees, which required a longer course of study at their medical schools, a wider range of subjects, and more proficient knowledge than would be necessary for the proposed general minimum standard. This passing of double examinations inferior to their own, with the accompanying payment of additional fees, formed the great ground of objection of the Scotch universities to the conjoint-scheme system in its present form. They would have no objection to the presence of Conjoint Board examiners at their examinations, if their students were not thereby put to additional expense. The farthest he could go would be to allow the final examination to be conducted by the Conjoint Board, though he did not see that even this would do any good to the Scotch universities. He objected also to the affiliation clauses of the Government Bill; he thought if men were obliged to join some of the licensing bodies before registration, these bodies should be also compelled to receive any women who wished to join them. He had also a strong objection to the proposal to make the fees uniform. Thus the English student by the English conjoint scheme would have to pay for the

support of three corporations, though the law required only one qualification, and also for the support of the Hunterian Museum. It was therefore really preposterous to ask Scotch and Irish students to pay the same fees as the English corporations, in the scheme, proposed to extract from the English students. The whole difficulty could be easily solved in England by the College of Physicians holding conjoint examinations with the College of Surgeons for a full qualification. The time had come when apothecaries' societies should cease to have anything to do with medical licences. As to direct representation of the profession in the Council, he was less in favour of it than he had been. He was rather in favour of a proposal that the General Medical Council should be elected by the Branch Councils; in that case the profession might be directly represented in the Branch Councils. He would not like to see the General Medical Council made a subdepartment of the Privy Council.

Dr. Gairdner began by giving some account of the Glasgow University Medical School, which is quite similar in every respect to those of the Edinburgh and Aberdeen Universities. At these schools the examinations are conducted partly by the professors, partly by outside examiners, one of the latter being always associated with each professor, and having equal power with him as regards both the written and oral examinations. Dr. Gairdner remarked that the outside examiners hardly ever complained of the laxity, but almost always of the stringency, of the examinations. He was even more opposed to the adoption of the conjoint scheme by the Scotch universities than either Professor Turner or Professor Struthers. Thus he disapproved very much of the proposal, made by way of compromise, that the final clinical examinations of the university students should be conducted by Conjoint Board examiners, for such a plan would tend to make their students distrust their teachers most in those very departments where fullest confidence was necessary. He agreed with those who thought the conjoint scheme would tend to deteriorate medical teaching in Scotland, his arguments on this point being similar to those advanced by former witnesses. But he would have no objection to examiners from the Conjoint Board attending all the university examinations, if their students were not thereby loaded with additional expense for the working of a scheme which the universities neither wished nor required, and which could not raise their standard, but would rather tend to lower it. This line of argument on the part of the Scotch universities against the conjoint scheme being thrust upon them, especially in the form adapted to the necessities and convenience of the English corporations, we certainly think is unanswerable. Dr. Gairdner also brought out another vulnerable point of the conjoint scheme proposal. The latter professes to be a plan to establish a uniform minimum standard of proficiency; yet he was confident that if a student who had passed the Scotch or Irish division of the Conjoint Board wished to affiliate with an English corporation, he would not be allowed to do so. Indeed, he believed the English corporations would be the strongest opponents of their own conjoint scheme if it were proposed to make it legal for any student who had passed one of the Conjoint Board examinations in any division of the kingdom to become thereby affiliated with any of the corporations he chose, whether belonging to that or to another division of the kingdom. But Dr. Gairdner's whole evidence was against the adoption of the Conjoint Board scheme. He saw no harm in the mere number of medical licensing bodies, providing the efficiency of each was properly seen to by the Medical Council. He, like Professors Turner and Struthers, would approve of a modified examination somewhat like that of the Staats-Examen of Germany. As regards the direct representation of the profession in the Medical Council, he was rather opposed to it on the ground that the periodical elections would cause much disagreeable and useless agitation. He thought the proportion of representatives of the Scotch universities on the Medical Council was absurdly inadequate, and most people who know anything of the matter will at once agree with him. Dr. Gairdner was examined also in regard to some of the Scotch medical corporations, and to their system of conjoint examinations. He pointed out, however, that while each of the Scotch corporations retains the power of granting its own single qualification, that single qualification is in no case granted without an examination in each of the three great practical departments of medicine, surgery, and midwifery. He contrasted this with the practice that had prevailed so long in England, where hundreds of practitioners held only the membership of the College of Surgeons, which was obtained until lately without an examination in medicine, and does not, even now, imply an examination in midwifery. He was in favour of legislation making it impossible that such partial examinations should entitle the holder to a place on the Register.

A NEW SPECIAL HOSPITAL.

Every now and then the attention of the profession is painfully drawn to some new scheme for the starting of a fresh special hospital. These unpleasant surprises—if we may so call them—generally arise from the attempts of one or two individuals anxious to aggrandise themselves at the expense of their professional colleagues, and to make the proposed hospital serve their private ends rather than the general good. The course of events is often this:—A man who is energetic, shrewd, and ambitious, but whose industry as a student has not been such as to qualify him for a staff appointment at his own or any other medical school, looks about him for some way of rising in the world. He sees that the public demand specialists; that special practice, when got, is lucrative; and a speciality accordingly he determines to have. He tries, it may be with success, to get attached to a special hospital. But perhaps no special hospital will have him. In such case he canvasses persons who are reputed to be both wealthy and liberal, lays before them statistical statements of the vast number of people suffering from the diseases for which he wishes that people should consult him, and highly coloured pictures of the agonies which such diseases cause; persuades them to subscribe and lend their names to his undertaking; advertises for funds on the strength of the names he has got, takes a house, and founds a hospital, of which he, of course, becomes the principal medical officer. In either case it too often happens that the man such as we have imagined—one whose tact, energy, ready and persuasive tongue, and shrewd instincts have been directed for years to the aim of making men and women believe in him—has a much more minute knowledge of the art of "managing;" and therefore probably a much greater power of influencing a committee of laymen (whose honesty of intention often does not supply their want of knowledge as to the matter in hand), than his professional colleagues, whose laborious days have been devoted to thoroughly mastering their profession and keeping themselves abreast of its progress. From this state of things it frequently occurs that the pushing canvasser steals a march over his more worthy brethren, makes himself prominent at their expense, and manipulates the hospital for his own purposes, controlling, among other things, the appointment of the staff, and taking care to make it the chief qualification of successful candidates that they shall be such as are not likely to oppose his wishes. Now and then the autocrat goes too far: his long-suffering colleagues will

bear overriding no longer; and what is vulgarly called a "row" ensues.

In what we have said we have no intention of sketching any institution in particular. The evils we have mentioned are inevitable in any hospital, the managing body of which does not comprise a sufficient number of members of competent knowledge, and of enough independence to prevent the place being made subservient to the interests of one person.

These general reflections have been suggested to us by a work which has been published for the purpose of starting another special hospital.(a) Its author, we believe, was till recently a member of the staff of the Soho Hospital for Women, to which he became attached when, after the last scandal in connexion with that institution, several vacancies occurred, owing to the indignant resignation of the majority of the staff. One of these empty posts was filled by Dr. Munro. The book is practically an appeal for funds to build and maintain a hospital in the West of London for lying-in women, and for the treatment of the diseases peculiar to females. It would seem to us that if a lying-in hospital is wanted at all, it is in the East, rather than in the West, of London. At the East there is an immense poor population, and the only charities which minister to the wants of lying-in women are the Royal Maternity Charity and the London Hospital. At the West there is nothing like the number of necessitous people, and they have St. George's, St. Mary's, the Westminster, the Middlesex, Charing-cross, the Samaritan, and Queen Charlotte's Hospitals, all of which give relief to lying-in women, and, with one exception, offer the advice of specialists for gynæcological cases. For the latter class of diseases alone there are also Soho and the Chelsea Hospital for Women. It is matter of great doubt whether lying-in hospitals are institutions to be at all encouraged. We have before expressed our opinions upon that point; and, therefore, all we have now to say is, that it does not seem to us necessary to build a hospital in the West-end of London to test the point.

But it is said that the proposed hospital is to be a training school for *medical men* and nurses. The author appears to have forgotten that there are two things essential to the formation of a school, viz., teachers and pupils. Medical men will not come to be taught unless there is some one who can teach them. The possibility of the formation of the imagined school depends entirely upon who are to be the staff of the proposed hospital. Dr. Munro does not seem to have taken this fundamental fact into consideration. It was not very long ago that a plaintive wail came up from Soho to a contemporary, the burden of which was, that if only medical men *would* send their cases there, how glad the staff would be to see them—a sufficient evidence of how little use for the purpose of instruction a large hospital may be if it lack the confidence of the profession.

We more particularly do not see that there is any need for a new hospital for this special class of diseases. There are plenty already; and it is surprising how few of those eminent men who are looked upon in this country and abroad as the leaders of English obstetric practice, either belong, or have belonged, to special hospitals. They have nearly all received their obstetric training, and have done the work which has made them famous, in general, not in special, hospitals. Unless Dr. Munro can secure the services of some eminent obstetricians for his hospital (and he does not mention having done so), we can see no prospect of the proposed school for medical men ever coming into existence. And if the hospital were established, we should fear much lest, and should deeply deplore if, starting with the best possible intentions, Dr. Munro yet in time came to find himself in the false position of being identified with a hospital which had failed to get the goodwill of the profession, and supported a precarious existence only by the aid of a lavish expenditure in advertisements. Thinking, as we do, that the projected institution is quite unnecessary, and that the prospect of its being carried out upon a sound basis is very small, we can only leave it to its fate, wishing no success to the enterprise.

(a) "Deaths in Childbed and our Lying-in Hospitals; together with a Proposal for establishing a Model Maternity Institution for affording Clinical Instruction and for Training Nurses." By Æneas Munro, M.D. London: Smith, Elder, and Co. 1879. Pp. 222.

THE WEEK.

TOPICS OF THE DAY.

That the Metropolitan Water Trust Bill would fail to please everybody was only to be expected; but it would seem that the opposition to it was much more general than was at first anticipated, for the more it was considered the less it appears to have been liked. In mentioning, last week, its introduction by Mr. Cross, we remarked upon the magnitude of the sum to be paid to the companies for surrendering their rights and property, and this point undoubtedly is the great standpoint of the opponents of the scheme, more especially as it is now shown that the payment proposed to be made will be equal to about forty years' purchase, or nearly twice what the property was worth in the market before negotiations began to be talked of. Mr. Samuel Morley, M.P., gave notice that on the second reading of the Bill he would move a resolution to the effect that the compensation proposed to be given is excessive, and would impose an unjust and unnecessary burden on the ratepayers of the metropolis; and Sir Charles Dilke moves for a return of the financial statement on which the calculations are based of payments to be made to the companies, showing, among other details, the market price of the stock on June 30 last and at the present time. A petition to the House of Commons has been drawn up by a committee formed at Mr. J. Beal's, Regent-street, and has been forwarded for adoption to the vestries and other public bodies in the metropolis. The objects of this committee are—(1) to secure with respect to the London Water Bill a more moderate basis of settlement by several millions; (2) in default of adequate concessions by the water companies, to be prepared to present to Parliament a competing scheme of supply. All things considered, we fear our prediction of last week, that the matter could scarcely be expected to be brought to a satisfactory conclusion this year, was too sanguine, since if the present opposition were only to assume a united and persistent form, there would be a strong possibility of Mr. Cross's scheme falling through entirely.

A Parliamentary Committee has decided against the proposed Bill for supplying the residents in the metropolis with sea-water for bathing purposes. The Bill propounded a scheme for drawing a supply of sea-water from a point on the south coast near Lancing, which should be pumped to a reservoir at a point on the South Downs 500 feet high, flowing by gravitation thence to the metropolis. It was not intended to lay the pipes further east than Regent-street at first; but it was proposed to supply the whole of the western districts at a rate of 1s. 8d. per thousand gallons, or at an annual charge of 3 per cent. on the rateable value. Some medical evidence, so called, was of course produced in favour of the Bill, stress being laid on the value of salt-water baths in hospitals for the treatment of skin diseases, and also as a pleasant and healthful stimulant in ordinary life. Moreover, it was "shown" that artificially manufactured sea-water was found in practice not to possess properties equally efficacious. We venture to predict that even the very best and purest sea-water will not be as

"efficacious" when used in London as when applied during a holiday visit to the seaside. The opposition to the Bill proceeded from the Metropolitan Board of Works, their contention being that the probable advantages in some respects of a sea-water supply would not outweigh the inconveniences attendant upon the breaking up of the streets by a new company, while as the popularity of the sea-water increased, so would the interference with the thoroughfares. The Committee adopted, we suppose, this rather matter-of-fact view of the case; at any rate, they decided that it was not desirable to proceed with the Bill.

The vital statistics of Switzerland for the past year can hardly be called satisfactory. The number of births for the twenty most populous towns was 14,163, or less by 73 than the returns for the year 1878. This is the fourth consecutive year which has exhibited a declining birth-rate. In 1876 the number of births per 1000 of the population was 33; in 1877 it was 32·9; in 1878, 32·4; and in 1879 only 31·8. The number of deaths was 11,337, or 295 in excess of the previous year. The mortality of 1879 and 1878 was at the rate of 25·4 per 1000, which was a trifle higher than 1877 (when the rate was 25·2), and lower than 1876. The most frequent causes of death were, phthisis, 1490; respiratory diseases, 1290; infantile enteritis, 1127; heart disease, 496; and apoplexy, 412. Epidemics and contagious diseases proved less fatal; whilst deaths by violence amounted to 516, of which 312 were from accident, 17 from homicide by misadventure, and 173 were returned as suicide.

A dairy farmer at Glastonbury was last week brought before Mr. Chance, at the Lambeth Police-court, charged with supplying milk deprived of three-quarters of the cream. This was the first case of the kind. Many dealers who have been fined at this Court for selling adulterated milk having declared that they had sold it as it was received from the country, the sanitary inspectors of Lambeth recently went to the South-Western Railway at Vauxhall, and took a portion of milk sent by the defendant to a dealer named Hopkins, and it was found to be deprived of nearly three parts of the cream. The defendant admitted that he had taken off a little of the cream, but Hopkins had not complained. Hopkins deposed that he had no notice from defendant that the milk had been skimmed; he had expected it to be genuine. Mr. Chance remarked that a number of milkmen had been fined at that Court; the late Act was passed expressly to meet such cases as the present, and dairy farmers must learn to send up pure milk from the country, and not to take off the cream. He fined the defendant £10, and £1 17s. 6d. costs.

The adjourned meeting of delegates from the various vestries and district boards of the metropolis was held last week at St. Martin's Vestry Hall, Mr. Watherston presiding, to receive the report of the committee appointed to consider the working of the Artisans' Dwellings Acts. After a careful consideration of the Acts of Parliament, and a statement of the general considerations arising therefrom, the report concludes by stating that the working of the Artisans' and Labourers' Dwellings Improvement Act, 1875, is impolitic and ruinously extravagant; and that, in the interests of the ratepayers, the provisions of the Acts known as Torrens' Acts (1868-79) should be put in operation and fully exhausted by the local authorities throughout the metropolis before any further action is taken under the first-mentioned Act; that steps should be taken forthwith to put an end to all proceedings under the Artisans' Dwellings Act which can possibly be stayed; and that it is desirable that a memorial to the Home Secretary should be prepared, to be presented by a deputation. The Chairman, in moving the adoption of the report, spoke at some length on the subject, explaining that it must be understood that the Committee fully recognised the necessity of improving the dwellings of the poor, whose deplorable condition was as dangerous as it is disgraceful to a civilised community; but they were, at the same time, of opinion that owners of property condemned as "unfit for habitation" should pay the penalty of their own almost criminal neglect, and that under no circumstances should a premium be offered by Act of Parliament to unscrupulous persons to allow their property to become unfit for occupation with a view of selling it to the ratepayers at its proper rent-producing value. The report was unanimously adopted.

A fire broke out at the Royal Victoria Hospital, Netley, last week, which was not got under until damage roughly estimated at between £2000 and £3000 had been done to he building and its contents. Soldiers, marines, and the sailors from a man-of-war anchored in the vicinity were employed to subdue the conflagration; but the flames spread rapidly through the floors, and it was at length deemed expedient to remove some of the invalids who were in an adjoining set of wards. The water percolating through the ceilings caused considerable injury to the contents of the museum.

The Corporation of Manchester and Salford is being urged to add considerably to the extent of public recreation-ground in the suburbs—a step which has become requisite through the growth of population and manufactures in these places. The question of appropriating a part of the Manley Hall estate for this purpose has been under discussion for some years, and a further effort is being made to bring about the purchase. The Salford Town Council have recently resolved to lease twenty-one acres of Kersal Moor, to be preserved in its natural state as a recreation-ground for the north side of the town. The importance of these open spaces in the vicinity of such a crowded city as Manchester is not lost sight of by the authorities, since it is stated that the cost of maintaining the parks already belonging to the Corporation amounted last year to the sum of £6292.

The Lower Thames Valley Drainage inquiry has been resumed during the past week, and, as several appearances for new opponents have been entered, the proceedings are evidently taking a wider range, and threaten to extend over an almost unlimited period. Mr. Nelson, the chairman of the Joint Drainage Board, was subjected to a long cross-examination; and subsequently Mr. W. Haywood, the author of the scheme of drainage proposed to be carried out at Molesey, appeared before the inspectors. He explained in detail the whole of the scheme submitted by him to the Joint Board, and showed that the spot chosen was the only large and isolated district in the valley of the Thames. The great bulk of the land, he said, was arable, and possessed no attractive features for building; standing upon any part of it you felt as if you were out of the world. His total estimate for sewers, land, and works was £318,000 in the first instance, but, mainly owing to the additional quantity of land proposed to be taken, the estimate would have to be increased by £50,000. The inquiry is expected to be continued from day to day for the present.

TESTIMONIAL TO DR. FARR.

We are requested to state that during the past week the following names have been added to the committee now being formed for raising a testimonial fund for presentation to Dr. William Farr, F.R.S.:—Earl Granville, K.G., F.R.S.; Lord Houghton, F.R.S.; Lord Aberdare; the Right Hon. Sir Stafford Northcote, Bart, M.P.; the Right Hon. W. H. Smith, M.P.; Thomas Brassey, M.P., President of the Statistical Society; John Walter, M.P.; William

Spottiswoode, President of the Royal Society; John Hainworth, F.R.C.S., Master of the Society of Apothecaries; J. De Cappelain, Esq., Highgate; Professor W. T. Gairdner, M.D.; Professor Frankland, F.R.S.; J. Napier Higgins, Q.C.; R Druitt, M.D., F.R.C.P., F.R.C.S.; G. H. Philipson, M.A, M.D., F.R.C.P.; Cosmo G. Logie, M.D., F.R.S.E., Deputy Surgeon-General; W. A. Greenhill, M.D. Oxon.; D. B. Balding, F.R.C.S., Coroner for Hertfordshire; J. T. Clover, F.R.C.S. A meeting of the committee will shortly be called (of which its members will receive due notice) to appoint an executive committee. Communications on the subject may be addressed to Mr. Noel A. Humphreys, of the Registrar-General's Office, Somerset House, who is temporarily acting as Honorary Secretary.

ARMY MEDICAL SCHOOL AT NETLEY.

THE thirty-ninth session of the Army Medical School was concluded on the 8th inst., Lord Bury, Under-Secretary of State for War, attending to deliver the prizes to the successful competitors. These were Mr. A. H. Keogh, of the Army Medical Service, who gained the Herbert Prize and also the Martin Memorial Medal; and Mr. G. Kirker, of the Royal Navy, who carried off the Parkes Medal for Practical Hygiene. We print below the lists of successful candidates for commissions in H.M.'s Indian Army and in the Naval Medical Service. The order of seniority of the gentlemen entering the Army Medical Department, by recent regulations, is not affected by the examinations at Netley, and as this list has been already published there is no necessity to repeat it.

List of successful candidates for commissions in H.M.'s Indian Medical Service, with the numbers of the marks gained by them in the combined London and Netley examinations:—

	Marks.		Marks.
G. W. P. Dennys . .	4964	A. C. Thompson . .	4368
J. W. N. Macnamara .	4920	F. Burness	4326
H. O. Stuart	4768	G. J. Ward	4294
J. C. Marsden . . .	4552	F. C. Reeves . . .	4153
J. Sykes	4503	J. L. Poynder . . .	4012
J. M. D. Stewart . .	4450	J. Hoey	3831
J. F. Tuohy	4393	A. G. Collington . .	3755
A. R. Campbell . . .	4375	C. A. Daubeny . . .	3628

List of successful candidates for commissions in the Naval Medical Service, with the number of marks gained by them in the combined London and Netley examinations:—

	Marks.		Marks.
G. Kirker	5440	G. H. Baukier . . .	3955
T. D. Gimlette . . .	4350	J. A. MacMunn . . .	3671
W. Tait	4329	J. Brunt	2876
J. Crowley	4320	M. Mackenzie . . .	2821

THE ELECTIONS AT THE ROYAL MEDICAL BENEVOLENT COLLEGE.

IT may be remembered that, at the last general meeting of the Royal Medical Benevolent College, resolutions were carried suggesting a plan for diminishing, if not altogether doing away with, the evils of canvassing for votes. Some of the Council, as well as other warm friends and supporters, of the College feared that the suggested changes would cause many people to take less interest in the elections, and would diminish the number of subscribers. But the Council have loyally carried out the resolutions accepted at the meeting, and the elections in May next will be conducted according to the system now adopted. The Council, at their meeting on Wednesday last week, appointed a Committee of Examination, whose duty is to carefully investigate the relative claims of those who have been admitted as candidates for pensionerships or foundation scholarships; to select of each class the candidates, in number equal to the number of vacancies, who, in the opinion of the Committee, best deserve election; and to submit to the Council the names of the candidates so selected. The Council will then inclose with each balloting-paper, made out as hitherto, a slip of paper with words to the following effect:—"*The Committee of Examination recommend the following cases as being in their opinion the most urgent,*" and the lists of the selected names. The Committe of Examination consists of six members of the Council, elected by the Council, and the Treasurer; and of the six elected members three will retire each year, three new members being elected. We understand that the knowledge that these changes would be made in the method of election has already much diminished the amount of canvassing and touting for votes, and we trust that the new system will be found to work well in every way. It will be a great triumph if the "time-honoured" but most objectionable canvassing system can be quite done away with, without any injury to the prosperity and efficiency of the institution. The Committee of the Governors of the College "for improving the mode of election of beneficiaries" have lately issued a report drawing attention to the changes made, and very pertinently observe that the present time "appears very opportune, for those who can afford to do so, to rally round the institution, and to evince, in a practical way, their belief that the Royal Medical Benevolent College is now more than ever worthy of support."

STEEVENS'S HOSPITAL SCHOOL OF MEDICINE, DUBLIN.

THE disruption of this School of Medicine appears to be imminent. The immediate cause is the dissatisfaction of the medical staff with the appointments recently made by the lay governors of the Hospital to the vacant physicianships. It is rumoured that three or four of the leading professors and lecturers in the School are about to resign their respective chairs. If this intention is carried out, the result must be the collapse of the School, and we cannot help thinking that the withdrawal of the Government grant to Steevens's Hospital will follow at no distant date.

THE MEDICAL REGISTER, 1880.

THE Medical Register for 1880 has just been published, and is a much more goodly-looking volume than usual. The contents of the pages are spaced out more, so as to give a much less crowded and scamped appearance than formerly; and the pages have a pleasing and fair amount of margin, which is a great improvement. These alterations have added, of course, somewhat, but certainly not to any objectionable degree, to the size of the volume, which contains 812 pages, while the Register for last year contained 675. The total number of persons in the Register continues to diminish. In 1878 the number was 22,841; in 1879, 22,564; and in the Register just published, 22,516; but this does not *prove* any diminution in the numbers of the profession, for up to the present year a great many names were in the Register that ought to have been removed years ago, and have been only gradually eliminated. The number added by registration in 1879 was exactly the same as in 1878, viz., 996, of whom 622 were added in England, 194 in Scotland, and 180 in Ireland. During the last year 551 names were removed from the Register under Section 14 of the Medical Act—that is the Section by which persons are required to keep the Registrar informed of any changes in their address. This is an improvement upon the two immediately preceding years; but it is much to be regretted that practitioners do not pay more attention to this important requirement. Sixty-five names were restored under the same Section of the Act. By ascertained evidence of death 548 names were removed from the Register in 1879, and eight "by ceasing to practise." The total number of names removed from the Register from all causes in the year 1879 was 1109.

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THE HEALTH OF LONDON.

The public health has steadily improved with the improvement in the weather, and the mortality from all causes in London has steadily and greatly diminished. The Registrar-General's Return for the week ending February 28 recorded a return to a normal death-rate for London, and that for the week ending March 6 showed a still further improvement. Allowing for increase of population, the deaths were 150 below the average number in the corresponding week for the last ten years. The annual death-rate from all causes, which in the previous weeks had declined from 48·1 to 23·7, was last week 22·9. The fatal cases of whooping-cough rose from 135 in the preceding week to 155, exceeding the corrected average by 84. The deaths from scarlet fever exceeded the average by 6; while the fatality of measles, diphtheria, and fever was below the average. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had for the four preceding weeks steadily increased, rose further last week to 185. The deaths referred to diseases of the respiratory organs, which had steadily declined from 1557 to 459 in the four preceding weeks, decreased to 390 last week, being 81 below the corrected weekly average.

PUERPERAL FEVER, OR WHAT?

With reference to a death in Queen Charlotte's Lying-in Hospital, referred, in the Registrar-General's Report dated February 20, to "puerperal fever," Dr. Grigg has written to the papers saying this is an error. After briefly describing the case, Dr. Grigg says—"The house-surgeon in the death-certificate inadvertently entered, among other causes of death, puerperal peritonitis, which was evidently misconstrued by the Registrar-General to imply puerperal fever." In his Return for last week, the Registrar-General, after stating that Dr. Grigg has informed him that in his (Dr. Grigg's) opinion "the case was not one of puerperal fever," pithily remarks—"The cause of death was thus certified by the house-surgeon: 'Induction of labour at eighth month; putrid child and placenta; chronic Bright's disease; puerperal peritonitis; septicæmia.' It is in accordance with the Registrar-General's system of classification to refer all cases of 'puerperal peritonitis, septicæmia' to puerperal fever."

PATHOLOGICAL SOCIETY OF DUBLIN.

At the meeting of this Society on Saturday, March 6 (the President, Dr. E. H. Bennett, in the chair), Dr. T. E. Little exhibited a specimen in which the right (ordinary) superior vena cava was completely absent, the vessel being functionally replaced by a large vein on the left side—a pervious left superior vena cava. The parts were from the body of an elderly female, of whose clinical history nothing could be gathered. On throwing back the pericardium, the right auricle was found to be of small size, ending above in a blunt conical extremity, from which passed upwards a small fibrous cord and fold of the pericardium, which became lost in the anterior wall of the right pulmonary artery. The two innominate veins (the right being the longer and more horizontal) united in front of the root of the left carotid, from which situation the large left superior vena cava descended. In its course it lay in front of the transverse aortic arch, and in front of the left pulmonary artery and veins; and thence, passing to the back of the heart, it lay in the posterior auriculo-ventricular groove, occupying the situation of, and here replacing, the coronary sinus. It eventually opened into the right auricle at the orifice of the coronary sinus. This course, it will be observed, corresponds exactly to the situation of the recognised vestigia of a left superior vena cava, as ordinarily described and met with. The vena azygos major was absent; the left vena azygos was of large size, and ascended upwards in contact with the aorta, and, arching over the root of the left lung, entered the abnormal vena cava. The heart otherwise, and the rest of the vascular system, presented nothing abnormal.

FEVER AND SMALL-POX IN THE METROPOLIS.

At the fortnightly meeting of the Metropolitan Asylums Board, held last Saturday, the reports from the fever and small-pox hospitals showed that the epidemic of scarlet fever, which has existed in the metropolis during the winter, is still lessening, but, on the other hand, the admissions from small-pox are increasing. It was stated that the two asylums at Stockwell, both used for fever cases, had received 27 patients during the fortnight; that 2 had died there in the same time, and 49 had been discharged, leaving 172 under treatment. At Homerton Fever Asylum 39 had been admitted, 3 had died, and 45 had been discharged, leaving 128 under treatment; at Deptford 19 had been admitted, making the total admissions 85, as against 86 admitted in the previous fortnight, and 333 under treatment, as against 356 a fortnight ago. At Homerton Small-pox Hospital 52 patients had been admitted during the fortnight, making 81 altogether under treatment; at Fulham Small-pox Hospital 28 had been admitted, 3 had died, and 21 had been discharged, leaving 53 under treatment; at Deptford 32 had been received, 8 had died, and 34 had been discharged, leaving 51 under treatment. In all 112 cases had been admitted during the fortnight, as against 102 in the previous period, and there remained 187 under treatment, as against 141 a fortnight before. The Committee reported that they had now 245 vacant beds.

CLINICAL SOCIETY.

In consequence of the fourth Friday in the month being Good Friday, the next meeting of the Clinical Society is fixed for the 19th inst. Papers announced for this evening (March 12), and not read, will take precedence on March 19.

Local Treatment of Diphtheria.—Dr. Charles Smith, in a communication to the *Australian Medical Journal* (November), states that a large experience in cases of diphtheria has convinced him of the superior importance of local treatment, although at the same time not neglecting general measures and the isolation of the patient. If the disease be owing to the presence of micrococci which fasten on the mucous membrane, and there undergo development, the effectual treatment would seem to consist in the destruction of the germs by local cauterisation; and Dr. Smith believes that many trials of this have failed only because they have not been effectually carried out. To succeed, the caustic (he prefers lunar caustic to all others, and next pure carbolic acid) must be most freely applied, for if the least particle of the disease be left, it will spread again from this centre, and no good will result. First, all the false membrane must, if possible, be removed either by the forceps or by hard friction with a mop dipped in glycerine and tannin, there being no use in applying caustic over this tough membrane. This procedure will have to be repeated because portions are left behind. In mild cases this may suffice, but in severe ones a raw and bleeding surface is produced, on which the membrane will immediately be reproduced unless the germs be thoroughly destroyed. As these often penetrate deep into the tissue, no mild application will suffice; and Dr. Smith uses a concentrated solution of the nitrate, applied with a small rag tied to a stick, going deeply with this so as to get below the disease, for unless this is done the application is useless. Tannin and glycerine should also still be used, in case any outlying spot has been overlooked, and fresh spots should be looked for, taking care not to rub off the scar produced by the caustic.

THE SELECT COMMITTEE ON THE MEDICAL ACT (1858) AMENDMENT BILL.

The Select Committee of the House of Commons re-appointed this session to inquire into the working of the Medical Act met to take evidence on Monday last, the 8th inst. The Committee consists of Lord Geo. Hamilton, Dr. Cameron, Mr. Dalrymple, Mr. Errington, Mr. W. E. Forster, Mr. Goldney, Mr. Mitchell Henry, Mr. Heygate, Sir Trevor Lawrence, Dr. Lush, Mr. John Maitland, Mr. Arthur Mills, Mr. Lowe, Dr. Lyon Playfair, Mr. David Plunket, Mr. Serjeant Simon, and Mr. Wheelhouse.

The chair was taken by the Right Hon. W. E. Forster.

Dr. Struthers, Professor of Anatomy at the Aberdeen University, said he was a Doctor of Medicine of Edinburgh University, and a Fellow of the Royal College of Surgeons of Edinburgh, and, in addition to having been teacher of anatomy for over thirty years, he had also been appointed by the Medical Council a visitor of examinations on two occasions. With regard to the proposal for the Conjoint Examination, he said there were two evils connected with the corporation qualifications—first, a want of security to the public from the half qualifications given by the corporations; and secondly, the inconvenience to the students from having to obtain qualifications from two corporations. These difficulties did not apply to the universities. The Scotch universities conferred qualifications in both medicine and surgery. The inconvenience might be removed without interfering with the universities at all, by simply requiring a complete qualification before registration, and by the institution of a joint examination by the corporations of each division of the kingdom. Last year they had 376 medical students at Aberdeen. The course of study in the three Scotch teaching universities extended over four years, including four winter sessions, whereas all the British corporations required only three winter and two summer sessions at a medical school, and one of the four years might be spent as an apprentice without having commenced medical study at all. The subjects of study in the Scotch universities were also more extensive than was required for the corporations. The examination for degrees at Aberdeen was a very searching one, and the teaching was more thorough than was required for the standard of the corporations. One cause of the superior teaching was that in the Scotch universities the professors were devoted to their departments, and were not continually changing, as was the case with the teachers at the English schools, where, when a man obtained a large practice, he threw up his lectureship. The weak points of the English schools could not be remedied through the Medical Council; the only way in which it could be done would be by Act of Parliament converting them into institutions like the Scotch universities. At Aberdeen they had six outside examiners who sat with the professors, having equal powers in the examinations. By the Act of 1858, security was given that the Scotch university standard should not be lowered. They had to apply to the Privy Council for leave to omit anything, and the universities could not act singly. As far as the Scotch universities were concerned, the conjoint scheme was not called for. Great misapprehension existed with regard to the University of Aberdeen, and it seemed to be considered of the same kind as the University of St. Andrews, but St. Andrews had not a medical school. Aberdeen, prior to the Act of 1858, had two distinct colleges then united into one university. He denied the statement that had been made, that Scotland graduated more students than it registered. He knew of no examinations more careful and searching than those at Aberdeen, and as a result their students uniformly distinguished themselves, one of them being this year at the top of the Indian Medical Service competition. The Scotch university minimum standard of examination was a very good one, and the effect of the Conjoint Board system, as proposed by the Bill, would be to lower the minimum. A Conjoint Board system was not called for in the universities, but in the event of its being considered of national importance, the question was, what concession ought to be made. The idea that the Scotch were opposed out and out to Conjoint Boards was correct, but only in a certain sense. Everything depended on the kind of Board to be proposed. They would do their utmost to prevent the establishment of a Board which would ignore the higher education and examination of the universities, obliging students to pass double examinations and to pay heavy fees. The result of the establishment of the Conjoint Board would be that there would be teachers calling themselves Conjoint Board teachers, specially preparing for its examinations, and introducing the system of grinding, hitherto unknown in Scotland. In London, which was the great place for grinders, the standard of education was low, and students did not care for the higher qualifications. There should be a definite recognition in the Bill of the rights of the universities, and students who had passed the university scientific examinations should be admitted to the Conjoint Examining Board on payment of a fee not exceeding five guineas. They had no objection to receiving visitors at examinations providing the students were not put to additional expense. It had been urged in support of the English scheme that it would not do for the status of the examination to have the university element excluded, yet it was a remarkable fact that the examiners of the Conjoint scheme were entirely corporation examiners, not one coming from the universities. That showed what a very slender connexion the English universities had with medical education. The object of the Duke of Buccleuch's proposal was a double one, first to avoid disturbance of their examinations,—for why should a university student who had passed a high examination in medicine, surgery, and midwifery, be compelled to undergo a second? The suggestion that the Conjoint Board examiners should sit with the university examiners would obviate that hardship, and at the same time secure the object that the public should have the assurance that the examinations were not below the level of the Board. That was an admirable suggestion. He agreed substantially with Professor Turner, that either the Duke's amendment should be adopted or else that the scientific examination should be conducted by the university, and the practical clinical examination by the Medical Board. Either plan would, to a great extent, remove his objections to the conjoint scheme. But the universities would expect that, first of all, it should be secured by the Bill that their scientific examinations should be exempted, and also that for the practical examinations the Conjoint Board would come to each university and sit with the university examiners. He was not to be understood as supporting the scheme of a Conjoint Board, but if it was to be a national advantage his University would not stand in the way, provided its scientific examinations were exempted and the arrangement proposed by the Duke of Buccleuch was accepted. But if the London College of Physicians and the College of Surgeons would do as the similar colleges of Edinburgh had done—viz., arrange a joint examination—that would be all that was necessary. There was no reason for thrusting the English scheme upon the Scotch bodies, which were doing excellent work, and they considered the proposal a most selfish one. The cry for a Conjoint Board had been got up by the London corporations, and had not been put to the practitioners of England at all. The conjoint system had been tried in Germany: it was resisted, and the result was they now had twenty examinations. There was the State examination, which was virtually an examination at each university, and was remarkably like the Scotch university system, though, perhaps, not so thorough. The central Government nominated the examiners, appointing the professors and a certain number of practitioners to sit with them. The only security they had that the examinations should not be much lower in one university than in another was in the character of the professors. There were no examining bodies but the German universities, and that made a considerable difference. He objected to making affiliation to a corporation compulsory. If left open it would be sought as an honour, but if it was compulsory it would be resisted, and would become an object of ridicule. The whole clause was a sham, because if the corporations were to have a right to oblige men to affiliate with them they should also be obliged to accept the women, and the London College of Physicians would rather close its doors than do that. By the conjoint scheme the student was to pay thirty guineas, and to receive three diplomas, whereas the Bill only required one diploma. No doubt the scheme was published before the Bill; but it seemed iniquitous that whereas a student was required to take only one diploma, he should have to pay for three He could see no reason why the fees should be

uniform. Standard of examination was one thing, and amount of fees was another. By the English scheme the student had to pay thirty guineas, and this was to maintain three corporations, five guineas going to the museum of the College of Surgeons. No doubt that was a noble museum, but he could not see the justice of making poor Scotchmen or Irishmen pay towards its support. He could not say that the feeling was strong in Scotland on the question of the constitution of the Medical Council; but his own opinion was that the Scotch universities were not sufficiently represented. The time had arrived when apothecaries' companies should cease to be licensing bodies in medicine. He was formerly of opinion that the direct representation of general practitioners was advisable, but he did not now think it was likely to do very much good. The Medical Council was large enough at present. If there was to be a Conjoint Board system he would suggest that the Medical Council should be elected by the Branch Councils of the three kingdoms. The adoption of that plan would let down softly some of the existing bodies and save their *amour propre*. The Branch Councils should be directly representative, and if there was direct representation the body of the profession had a right to claim that one-half of the Councils should be elected by them.

By Mr. Arthur Mills: One of his objections to the Bill was that as far as Scotland was concerned it would rather tend to lower medical education.

In reply to a question, whether it would be desirable to make the Medical Council a sort of sub-department of the Privy Council, the witness said he should not like to see the medical profession placed under the heel of a bureau. The Branch Councils might be enlarged a little, and they could elect the General Council. There would be no harm in giving the profession representatives, but although there was a good deal of agitation in some of the medical journals, he did not believe that practitioners cared much about it.

By Sir Trevor Lawrence: The medical profession in Scotland did not require reform. He knew of no profession so well educated as the Scotch general practitioners, and in the disparaging remarks made with regard to the Scotch examinations the speakers were perhaps referring to the state of matters which ended twenty years ago. Ever since 1858 the degrees of the three Scotch teaching universities had been on the same level, and had taken high rank. They would not object to any powers given to the Medical Council as to the minimum examination; they were so far above the minimum that it really did not concern them. They would object to the Council having power over the higher qualifications, because in that case they would have the English universities and all the corporations combined against them.

By Dr. Cameron: The Aberdeen University gave no medical degrees unless the candidate had also passed all examinations necessary for a surgical degree. At St. Andrews they had had only one or two candidates for the M.B. degree during the last twenty years. There was no medical school there, but they were allowed to give ten M.D. degrees in each year to practitioners of fourteen years' standing, but they must pass an examination.

By Dr. Lyon Playfair: The fact of the fee being ten guineas less in Edinburgh than in London would not prompt men to go there to take their degree, because the expenses of travelling and so on must be considered.

Dr. Gairdner, Professor of Medicine at the Glasgow University, said, in reply to the Chairman, that the number of medical students who matriculated there had continually increased from 1861 to the present time. In 1861 there were 283, now there were 560. The increase was common to the three Scotch teaching universities. It had been accompanied in Glasgow by a great increase in the means of teaching, and was not caused by any diminution in the stringency of the examinations. From 1874 to 1879 there were 845 candidates for the first examination, of whom 456 passed and 389 were remitted. In the second examination, out of 568 candidates 375 passed and 193 were remitted. In the final examination, out of 414 candidates 334 passed and 80 were remitted, the proportion of rejections being, at the three examinations, 44·7, 34, and 19·3 per cent. The number of rejections at the first examination seemed rather large, but he found, on inquiry, it was to be ascribed to the necessity of sending back a considerable number of the candidates at the beginning. The outside examiners hardly ever complained of the laxity, but almost always of the stringency of the examinations. It was physically impossible for a student who had been plucked, or who probably would be by another examining board, to go to Glasgow with much chance of success, because he would have three or four examinations to pass. Dr. Acland, when asked whether such a thing was possible, said he did not know; but he ought, as President of the Medical Council, to have known that the regulations at Glasgow absolutely precluded it just as much as the regulations at Oxford. The clinical examinations were conducted partly by professors and partly by non-professorial examiners; they were thoroughly inspected by the Medical Council in 1867-68 and 1874-75, and the inspectors reported very strongly in their favour. There was nothing like the Dutch auction spoken of by previous witnesses. A Conjoint Board would greatly deteriorate the efficiency not only of the Glasgow University, but of all the Scotch universities. It would lower the prestige of the degrees of the universities, and deprive them of the Parliamentary and legal privilege which they had possessed for a century and a half, and on which the efficiency of their system was built—the privilege that the degree conveyed a licence to practise. If on national grounds it was considered desirable to have a Conjoint Board, the examiners might go to Glasgow and act in concert with the examiners there. He preferred that to the suggestion that had been made, that the theoretical and scientific examinations should be conducted by the University, and the clinical and practical examinations by the Conjoint Board. That was not a sound principle at all; it trusted the University examiners up to the last point, and distrusted them just where it was most important that the students should have confidence in their teachers. If the Conjoint Board system tended to make students determine to forego a university education, and go in only for an education that would enable them to pass the Conjoint Board, that would be a very great evil. The special character of the English system was that it induced a student to give the go-by to the fundamental sciences and to content himself with the training of the schools. According to the Bill a student would not be affiliated in either of the three divisions of the kingdom unless he had passed the Conjoint Board of that division. If it were proposed to alter that arrangement he believed all the English corporations would at once rise in opposition, for they did not want men who had not passed the Conjoint Board in England. If a man examined by the Conjoint Board in Scotland had power to join any of the corporations in England or Scotland his object would be very much diminished. He had no very strong view upon the subject of direct representation, and personally he shrank from the notion of periodical agitations in the profession and a system of canvassing for the purpose of sending a man to the Medical Council. The Council was quite competent to do its own proper work, medical education and registration. If it could be made smaller while preserving its representative character it would be an advantage. The representation of the Scotch universities was monstrously inadequate. It was absurd on the face of it that a university like Durham, or even a university like Oxford or Cambridge, should have a member of its own, while the Scotch universities, which were so much more interested in medical education, had only half a member each. Glasgow University had more medical students than Oxford, Cambridge, and Durham put together. They were unanimous as to the evil of admitting to the Register persons with only one qualification, and he was quite in favour of legislation to the effect that no practitioner should be simply a qualified surgical or a qualified medical practitioner. No doubt the Scotch corporations and universities had their several interests, and in some instances were more or less opposed; but in reality he did not think there was any unhealthy opposition. The disputes between them had tended to good, and the pre-eminence of the Edinburgh University was very greatly due to the influence of the College of Surgeons upon it, and *vice versâ*. In order to get his certificate of surgery a student at the Edinburgh College of Surgeons had to be examined in medicine and midwifery as well as in surgery. For years that College had never passed a man without examining him in midwifery; and he would go the length of saying that there was no civilised country in the world, except England, where it had been an habitual thing for a man to practise simply with a licence in surgery, without being examined in medicine, midwifery, and materia medica.

By Lord George Hamilton: The Conjoint Board scheme

would increase the sums which students would have to pay before they could qualify, and it would be utterly extravagant to expect a student to pay £30 for a qualification which he practically had in his degree. Every unnecessary expense arising from a mere legal loading of expenditure would tend to prevent men entering the profession, and that would produce quacks.

By Mr. MITCHELL HENRY: He saw no harm in having seven licensing bodies in Scotland, provided the licences were properly inspected and looked after by the Medical Council. The system of permitting bodies which gave the education also to give the licence to practise was a most valuable part of the discipline of the students.

By Mr. WHEELHOUSE: The Faculty of Physicians and Surgeons of Glasgow, like all other corporations, granted a diploma without residence. Whether or not it granted diplomas on inadequate terms, was a question he could not answer, but the diplomas were granted after two or three examinations. He approved of the Staats-Examen with this exception, that, as Professor Turner said, they had two examinations going over the same ground. He would rather that the examiners should simply conduct one set of examinations and grant one degree carrying the licence to practise. Of course that would cut at the very root of all conjoint schemes, which result would be what he should wish.

By Dr. LYON PLAYFAIR: The Scotch corporations had voluntarily formed a Conjoint Board already. The Glasgow Faculty united with the Edinburgh College of Physicians in a conjoint examination, and the latter also united with the College of Surgeons, each retaining power to give separate diplomas. A double qualification was desirable. He had no objection whatever to the Medical Council nominating a number of extra-academical examiners greater than would be required, and the University Court selecting out of the list those who should be appointed.

By Dr. CAMERON: He was not acquainted with the proceedings of the College of Physicians of Edinburgh, and therefore could not say that that College granted 115 licences in medicine alone last year; but he knew that every one of those licences implied an examination in every department, including surgery. Thirty-four licences were granted by the Faculty of Physicians and Surgeons of Glasgow last year; they ranked as surgical qualifications, but those who obtained them had to undergo complete examinations—*i.e.*, in medicine and midwifery, as well as in surgery. He was quite willing that the Medical Council should send assessor examiners to the examinations at the University of Glasgow, but it was a difficult matter to say how the expense should be defrayed. The Scotch universities were very poor, and had not the means of paying for those luxuries which some people wished to force upon them. It would certainly be fairer to expect Government to pay the expense than to call upon the poor students to pay more heavily than they did at present. The universities already had the power of giving the double qualification in medicine and surgery, and he had not the least objection to its being made statutory that they should not give the qualifications separately.

By Mr. MILLS: He did not attach much importance to direct representation, but he had great respect for the feelings of others. Personally, his objection was to the excitement it might cause among the profession.

In reply to Mr. Lowe and Dr. Playfair, the witness stated that he objected to the proposal of the conjoint scheme as aiming at the establishment of a uniform minimum standard. What was wanted was not a dull equality of standard among the licensing bodies, but a guarantee of the efficiency of each.

The Committee then adjourned.

ACADÉMIE DE MÉDECINE.—At the meeting of the Academy, March 2, M. Guéniot was elected into the Section of Accouchements by the votes of fifty-four of the sixty-four members who were present.

ST. VINCENT'S HOSPITAL, DUBLIN.—We understand that Mr. Matthew Joseph Kehoe has been appointed to the vacant surgeoncy in this institution in room of the late Dr. O'Leary, M.P. Mr. Kehoe became a Licentiate of the King and Queen's College of Physicians and of the Royal College of Surgeons in Ireland in the year 1877. Since that time he has acted as Demonstrator of Anatomy and as private teacher in the School of Medicine of the Catholic University, Dublin.

THE RECENT FLOOD IN ST. KITTS.

SOME account of this catastrophe has already appeared in the English newspapers, but it seemed to the author that a short narrative of it by a medical observer might perhaps be acceptable, and we are glad to give it a place in our columns.

This island is composed of a central mountain range, the highest peak of which reaches 4000 feet, and of a broad belt of fertile and highly cultivated land encircling the mountains and sloping gradually to the sea. The chief town, Basseterre, one of the most picturesque places in the West Indies, contains 8000 people, and is situated about two miles from the eastern extremity of the mountain range.

The usual annual rainfall here is from 60 to 65 inches; that of 1879 was large, being 67·20 inches. We had 5·50 inches during the first ten days of January this year; whereas during the whole month of January last year only 3·55 inches fell. The barometer had been very low, 29·80° for the three days preceding the catastrophe. Its minimum average during January, 1879, was 29·94°.

Sunday, the 11th, was an exceedingly sultry day, though the thermometer at its highest reading was only 80°, and the wind was moderate and from the north-east, a cool and normal point. The average maximum of the thermometer here at this time of the year is 84°. The feeling of oppression and languor, as if from heat, was nevertheless felt and complained of by many persons during the day and in the earlier part of the night.

Dense masses of dark clouds settled on the mountains in the evening, and no doubt rain fell heavily on the highlands for many hours before it began in the town itself, but at twelve o'clock it suddenly came down on the roofs, not in drops, but in streams. The extraordinary force and continuous character of this rain have caused many persons to conclude erroneously that a waterspout broke on the town and adjacent hills. In about three hours so much water fell from the sky as to sink the boats attached to the sterns of the vessels in the harbour. The captain of one of these ships found nineteen inches in a puncheon on his deck. The manager of an estate in this neighbourhood measured twenty-five inches in a large iron vessel by which he was in the habit of estimating large rainfalls when his gauge overflowed. The Hon. Mr. Evelyn, who has for the last twenty years or more kept the meteorological records of the island, calculates that thirty inches fell in those three hours. Such a deluge is unprecedented in the history of the West Indies, and constitutes a surprising phenomenon well worthy of record, apart from the melancholy interest attached to its tragical results.

At about 1 o'clock a.m. an immense sheet of water rushed from the eastern end of the mountain range upon Basseterre. Three of its streets, though dry and dusty as the rest during ordinary weather, are in reality continuations of gorges in the hills, and in very heavy showers water pours through them from the highlands to the sea. The flood, however, dashed across all these, of course swelling immensely the stream, or rather river, in each (in one of them, called College-street, to the height of fifteen feet); then burst on a dense accumulation of little houses arranged in narrow lanes and alleys, and called the Temple; and finally directed its course to the sea down the western side of the Square, which is in the very centre of the town, in a torrent about eight feet deep and of amazing rapidity, carrying with it houses, walls, trees, canes, beasts, and scores of shrieking human beings. The chief loss of life and property was consequently sustained in the Temple, and in the blocks of houses on the sides of the three streets above mentioned, but no part of the town escaped damage.

At four o'clock in the morning of the 12th the fury of the torrent had sufficiently abated to allow of walking, or rather wading, through the streets, so that the whole mischief was done in about three hours. The force of the stream was at first so great that living and dead people were carried a very long way out to sea. A woman, now in the hospital, was picked up by a boat in the Nevis channel, eight or nine miles in direct continuation of the torrent from the coast of Basseterre. The next night the wind blew from the south, and brought back to the beach, which faces that quarter of

the horizon, numerous corpses, but many had been swept so far out that they have never since been seen; and fifteen bodies were cast ashore on the island of St. Eustatius, twenty or more miles to the west of this town. One dead and several living persons who had been carried to a great distance from the land were subsequently brought by the tide to Old-road Bay, which is about five miles from Basseterre.

There have been found 109 human bodies, and 123 persons whose names and former places of abode have been recorded by the police are missing, and must now be reckoned among the dead. Three have since died from injuries received in the flood. The total loss of life is probably about 240. I have heard various estimates of the value of the property destroyed; some putting it as low as £50,000, and others at three times that amount. This includes the damage done to estates around the town, two or three of which have lost £3000 each. Not only the roads and young and old crops, but the highly manured and elaborately prepared soil in which the canes were growing, the fields themselves, over which the flood passed, were swept into the sea or buried beneath vast mounds of sand from the mountains. This sand, which is called here "terrace," is the result of the disintegration by rain and vegetation of the rocky surfaces of the mountains, and collects gradually at their bases or in the multitude of deep little valleys and watercourses by which they are intersected.

Most of the streets of the town are literally interred, covered up to the depth of four or five feet with the same sand, which rises in some places in mounds twelve feet high. The bay and two or three miles of the adjacent coast-line have received such additions of earth as to drive the sea back to a distance of from fifty to a hundred and fifty yards, so that where boats and small sloops used formerly to ride at anchor is now dry land. Some idea may be formed from these details of the immense quantity of earth brought down from the mountains. When the flood was becoming more sluggish in its course it presented the appearance of a monstrous semi-liquid landslip.

Many corpses have been exhumed from the streets. One, of a woman, was in a standing position. She had evidently been trying to wade through the sand-laden current. One leg was in advance of the other, the hands were stretched out, the head bent forward and a little towards the left shoulder. A heavy door rested on her hips. She had on two or three petticoats and a pair of corsets. This poor creature's body was not found till five days after the catastrophe. It was much swollen, perfectly rigid, and, of course, horribly offensive. The features were unrecognisable. It looked like a statue of corruption. Another woman, whose body I saw dug up from under two or three feet of sand in the Square, had apparently been killed while hurriedly dressing herself. The boards of a room were around her. One leg, on the foot of which were a boot and a stocking, was fully extended and stiff as a rod; the other, the foot of which was clad in the stocking only, was drawn up, so that the heel was pressed closely against the buttock, as if in the very act of pulling on a boot. She had been buried three days. Looking at these and similar exhumations, I could not help thinking that floods like this had played a more prominent part than is usually assigned to them in the fossilisation of large land-vertebrates. There were, of course, many hundreds of carcases of brutes on the beach and in the sand in the streets.

Wounded people were not nearly so numerous, in proportion to the killed, as was at first expected. Such a state of things might naturally have been inferred, however, from a more careful consideration of the character of the calamity. The people were caught in their beds in the middle of an awfully dark night by the sudden rush on their houses of a mighty river, bearing in its course innumerable stones and trees, and many ten thousands of tons of earth. About seventy persons received aid from the hospital as out- or indoor patients on account of injuries received that night. Most of these were cases of wounds and bruises of the skin. A man had two ribs broken. Another got a large quantity of sand forced into his nostrils, producing fever and eczema. A woman suffered in exactly the same way. The face of another woman was monstrously swollen; the eyes could not be opened, and the upper lip was cut in several places. She looked like a prize-fighter who had been severely punished. A girl was stabbed in the calf with a sharp-pointed stick; the wound being about five inches long, and filled with stones and sand. She was not brought into the hospital till two days after, when she had hot fever with vomiting; the leg and thigh were much swollen, and the discharge from the wound was very offensive; the skin over the track of the puncture had also mortified. Her wound was laid open, sponged with pure carbolic acid, subsequently syringed twice a day with permanganate of potash solution, and covered with lint soaked in the undiluted liq. calc. chlor. of the British Pharmacopœia. I also gave her carbolic acid internally. She is now doing well.

Of the three persons who died from their injuries, one was an old man just convalescent from fever. A neighbour pulled him off his bed just as it was floating away with him. He died next night from exhaustion in the house to which he had been carried. The second was also an old man who had been dragged out of the water by a friend and carried to a house in the neighbourhood. He died from pneumonia and injuries to his throat. The third person was an old woman who was brought into the hospital with bruises on her arms, legs, and face. She was very weak and exhausted from the fright that she had passed through, and could not be rallied.

A woman and her husband contrived, while being borne along by the current, to lay hold of a tree in the Square close to my house, from which perilous situation they were rescued. She had that night given birth to a child. It, along with two other little children of hers, was drowned. Her womb was firmly contracted. She has since done well, having only suffered for two or three days from a swelling of one breast, which did not suppurate, and from pains in the ears, which had been filled with sand.

One naturally seeks for a way of accounting for the extraordinary rainfall that produced this flood. Occurrences of this sort have certainly been remarkably frequent during the last few years all over the world. The boiling lake of Dominica, which is 150 miles S.E. of St. Kitts, showed signs of increased volcanic activity on the Sunday preceding the flood in this island. Roseau, the chief town of Dominica, was suddenly, at mid-day, covered with a dense black cloud, from which repeated flashes of very vivid lightning accompanied by loud thunder issued. In a few more minutes a deluge of muddy rain descended, which left a deposit about an inch thick on the streets and houses of a fine powder consisting chiefly of sulphur and iron pyrites. It may seem rather a *post hoc, propter hoc* style of reasoning to connect this event with our flood; but it seems to me possible that the atmosphere of St. Kitts may have been influenced, in such a way as to produce the astonishing meteorological phenomenon of twenty-five inches of rain in three hours, by the electrical disturbances in the air over the volcano in Dominica.

THE OCCURRENCE OF INDIGO-PRODUCING SUBSTANCES IN THE URINE.

Professor J. M. Purser recently made a communication on this subject to the Irish College of Physicians. The paper is so important that we give it here in abstract:—

In the digestive tube two kinds of processes take place:—1. Digestive processes effected by the agency of unorganised ferments formed by the various glands; 2. Putrefactive processes effected by the action of organised germs which are swallowed with the food.

Those processes of putrefaction or fermentation in which hydrogen is developed cannot occur so long as the reaction is acid; consequently, in the stomach under normal circumstances they are not met with, but in cases where from disease the acid secretion is lost, putrefaction may occur with development of H_2, CO_2, H_2S, etc.

In the small and upper part of the large intestine, where the secretion is alkaline, putrefactive processes undoubtedly occur.

The pancreas is the chief digestive gland whose secretion is active in the intestine. Under its influence starch is converted into dextrin and sugar, fats are split into glycerin and fatty acids, and albumins are transformed successively into a globulin-like body and peptones. From these are further formed leucin, tyrosin, hypoxanthin, aspartic acid, etc. These products of pancreatic digestion can be obtained in experiments outside the body when precautions are taken

to prevent the access of putrefactive germs, and in the process there is no development of H_2, H_2S, or of ill-smelling substances. If, however, the germs of putrefaction are allowed to contaminate the digesting mass, a number of products are formed besides those mentioned, the more important of which are indol, phenol, H_2, H_2S, and ammonia.

In the intestine and in putrefaction carried on outside the body, but in presence of digestive ferments, the process advances much more rapidly than under the action merely of putrefactive germs. The reason of this is that the earlier stages of putrefaction and of digestion are the same or nearly so. These stages are gone through more quickly by the digestive than by the putrefactive ferments, and consequently the pure putrefactive actions can start from a more advanced stage than when they have themselves to perform the entire process.

It is of interest to know to what degree the putrefactive processes occur during life, and the fact that some of the products of putrefaction are absorbed from the intestines, and appear, more or less altered, in the urine, seemed for a time to promise a mode of determining the degree of putrefaction in the interior of the body. Although further research has shown that the condition of the urine is not such a certain index as was supposed of what is going on in the intestines, yet, nevertheless, there are many facts of great interest connected with the elimination by the kidneys of the products of intestinal putrefaction.

One of the most remarkable products of intestinal putrefaction is indol. This substance is crystalline, melts at 52°, and has the chemical composition represented by the formula C_8H_7N. It has a disagreeable fæcal odour. It can be got by ordinary putrefaction of albumins, by heating albumin with water to 200°, or by fusing it with caustic alkali. It cannot be got by the action of acids or reducing means. This substance, when formed in the intestine or introduced in the food, or when injected into the subcutaneous tissue, reappears in the urine as a body which, when acted on by acids and oxidising means, is converted into blue indigo. This indigo-forming substance was at first supposed to be identical with indican, the indigo-forming substance of plants, and which is a glucoside. Hoppe-Seyler, however, threw doubt on this by showing that the vegetable indican is much more readily decomposed than the indigo-forming substance of the urine. Baumann and Brieger(a) have recently studied with great success this question. By feeding a dog with indol they obtained large quantities of the urinary indigo-forming substance, and find that it is the alkaline salt of indoxylsulphuric acid, the ether sulphuric acid of hydroxylised indol. It is a crystalline substance, having the formula $C_8H_6NSO_4K$. By the action of hydrochloric acid in the presence of water it is split up into indoxyl and sulphuric acid—

$$C_8H_6NSO_4K + H_2O = C_8H_6NOH + KHSO_4.$$

By oxidation the indoxyl is converted into indigo—

$$\underset{\text{Indoxyl.}}{2(C_8H_6NOH)} + O_2 = \underset{\text{Indigo.}}{C_{16}H_{10}N_2O_2} + 2H_2O.$$

This substance is greatly increased in the urine in certain morbid conditions—such as obstructions in the small intestine, peritonitis, and paralytic conditions of the bowel. It is excreted in large quantities also in many cachectic conditions which do not indirectly involve the intestine. It is not increased in simple constipation or when the obstruction is seated in the large intestine, unless this obstruction lead to peritonitis or paralytic distension of the small intestine. It is easily tested for by the method of Jaffé. Equal parts of urine and hydrochloric acid are mixed together; then a saturated solution of common bleaching salt is added cautiously, drop by drop, until the maximum of blue coloration is obtained. If the urine be then shaken up with chloroform the indigo may be extracted, and a fair estimate of its quantity arrived at.

Another substance developed in the intestine by putrefaction is skatol. This body, recently discovered by Brieger, has as yet been found only in human fæces. It is closely allied to indol, and has, like it, a fæcal smell. It is crystalline, but melts only at 93·5°. The chemical composition is not yet perfectly known, but it is probably $C_{10}H_{11}N$. It is hence an ethyl indol. It is not known whether this substance appears in the urine. When injected into the subcutaneous tissue of rabbits, the urine gives a violet precipitate with hydrochloric acid and chloride of lime. This is, however, not indigo, and does not sublime.

In the urine of the herbivora (cow, horse, etc.) a substance exists in considerable quantity which, on treatment by acids, yields phenol; this phenol-yielding substance exists also in the urine of men. It has been shown that phenol is formed in the putrefaction of albumen, and Brieger has found phenol in the intestinal contents. Baumann has shown that this and the phenol which is formed in the intestine consists mainly of paracressol, and only in small proportion of actual phenol; while Weyl has shown that paracressol results from the putrefaction of pure tyrosin. In a recent paper(b) Baumann has shown that when an animal is fed with paracressol, while part of this substance passes into the urine as alkaline paracressol sulphuric acid, a considerable quantity is converted in the system into paroxybenzoic acid, and that paroxybenzoic acid in the system or by putrefaction is in part split into phenol and carbonic acid. Hence the phenol which occurs in the urine as alkaline phenol sulphate, is probably derived from the further putrefaction of the tyrosin formed in the intestine, and passes through the stages of paracressol and paroxybenzoic acid. The method of examination of the urine for phenol consists in acidulating strongly with sulphuric or hydrochloric acids and distilling. To the distillate bromine water is added as long as any precipitate or turbidity forms. If phenol be present a yellowish-white crystalline precipitate of tribromide of phenol is formed, which may be collected and weighed, and from which it is easy to calculate the quantity of phenol present. It was at first supposed that the quantities of the indigo-forming and phenol-forming substances present in the urine ran parallel to one another. This has, however, been shown by Brieger not to be the case; and in some cases in which the indigo-forming substance was present in excessive quantity the writer has found phenol altogether absent.—*From the Dublin Journal of Medical Science.*

(a) *Zeitschrift für physiologische Chemie*, iii., 254.

(b) *Ibid.*, iii.. 250.

FROM ABROAD.

Therapeutical Action of Cold.

Dr. W. H. Thomson, Professor of Therapeutics in the University of the City of New York, in a lecture reported in the *New York Medical Record* for January 3, furnishes a very good summary of the modes of employing cold therapeutically.

Cold as a Tonic.—Cold acts as an irritant affecting the vaso-motor system, and producing a shock which is followed by reaction. In other words, this system is exercised; and all moderate exercise tends to strengthen the organ called into action, and permanently to improve its nutrition. Cold, then, is a vascular tonic, and may be used generally or locally. When the circulation is feeble, and there is loss of muscular power, the general use of cold will arouse the heart, restore arterial tone, and thereby improve the nutrition of the whole body. Various forms of bath may be used, according to the strength of the patient, taking care never to cause exhaustion by its too frequent or too protracted use. A thorough reaction should always follow, and never a sense of lassitude or fatigue. When the irritant effect of cold water does not prove sufficient, salt or some mild rubefacient should be added. If the patient is too feeble to bear even the sponge-bath, simple exposure of the surface of the body to cold air will often prove beneficial; and in all cases reaction may be assisted by friction. A cold douche to the nape of the neck is indicated in the following conditions:—1. When, after sun-stroke, the arteries of the head remain dilated, and there is headache and dizziness on exertion or exposure to the sun. 2. In all cases in which headache is confined to one side, and is attended by dilatation of one temporal artery and suffusion of one eye. 3. In false croup, or the crowing inspiration of children. 4. In tinnitus aurium, when the throbbing is synchronous with the beating of the heart, and the tympanic arteries are distended, the cold douche to the nape, aided by the internal use of hydrobromic acid, may afford relief. Sponging the chest of a phthisical patient with cold water lessens the susceptibility to cold. Local applications of cold water are useful in promoting

the absorption of inflammatory effusions and exudations in the subacute and chronic stages; also in restoring the balance of the circulation in the liver and spleen when enlarged in malarial poisoning. The hip- or sitz-bath is useful in hæmorrhoids, prolapse of the rectum, and congestion of the pelvic viscera.

Cold as a Styptic.—Cold acts as a styptic by constringing the arteries through its influence on the vaso-motor nerves. It need not always be applied direct to the seat of hæmorrhage, as it will affect distant parts in accordance with the laws of the vaso-motor system, the most important of which are—1. An impression on the afferent nerves of a patient will cause a variation in the calibre of the arteries of that part. 2. It will also cause a variation in the arteries of all organs situated directly beneath that part. 3. In the case of organs which are in pairs and perfectly symmetrical, as the eyes, ears, hands, and feet (the lungs, kidneys, and testicles are not), variation in the calibre of the arteries of one will cause a similar variation in the other. 4. Variations in the calibre of the arteries of certain parts are accompanied by corresponding changes in the arteries of certain other parts, and these particular associations are to be determined by experiment: for example, the relation between the circulation of the feet and that of the pelvic viscera and the pharynx, and the relation of the circulation at the nape of the neck to that of the head and face. The following instances illustrate the application of these laws:—(1) Cold water applied direct to a bleeding surface. (2) Ice-bags to the epigastrium to check hæmatemesis. (3) Holding any cold body in one hand to arrest hæmorrhage in the other. (4) Cold foot-baths to arrest metrorrhagia. In post-partum hæmorrhage the best means of applying cold is by ether spray, for the sudden and intense impression produced causes effectual contraction of the uterus without chilling the patient. If ether spray is not available, cold water should be poured on the abdomen from a height of two or three feet, the shock of the falling water materially assisting the action of the cold. Either of these methods may be used in hæmoptysis.

Cold as an Antiphlogistic.—This may be employed to arrest acute inflammation prior to suppuration, or to prevent threatened inflammation. It does this by causing a protracted constriction of the arteries, thereby preventing the active congestion essential to acute inflammation. It should invariably be applied as dry cold directly to the part affected, in sufficient intensity to relieve pain, and continued so long as the exciting cause exists. If, before the tendency to inflammation has entirely disappeared, a neuralgic pain occurs, it is a sign that the vaso-motor nerves have become exhausted, and the use of cold must be at once discontinued, or gangrene will result. Moreover, the patient will feel more comfortable without than with the cold application. This neuralgic pain is continuous, and, if the injured part be one of the extremities, it extends from the part injured towards the trunk. Inflammatory pain, on the other hand, is local throbbing accompanied by local heat, and is relieved by more thorough application of cold. In fractures, or other severe injuries near joints, the injured parts should be surrounded with pounded ice placed in pigs' bladders or rubber bags, two or three layers of perfectly dry muslin being placed between the skin and bags, lest the patient be chilled too suddenly. A bottle filled with iced water makes a good antiphlogistic splint for injuries of the hand. Inflammation of the eyes may be controlled, and its spread from one eye to the other prevented, by means of cold applications. Ice-bags should be applied to the head and spine in epidemic cerebro-spinal meningitis. Cold applications will control the spread of erysipelas, and are the best means of relieving febrile headache. Headache from uterine trouble is best relieved by moist warmth. Cold should not be used antiphlogistically in any acute inflammation of the internal organs except peritonitis with vomiting and meningitis.

Cold as an Anæsthetic.—The use of cold as an anæsthetic depends upon its physical property of freezing tissue and deadening sensation without injuring vitality. It is most useful in operations where no great thickness of tissue is involved, as opening abscesses, amputation of fingers, Cæsarian section and ovariotomy. In all cases the action of the cold should be secured as rapidly as possible. Apply ether spray to the part alone which is to be operated upon. Anæsthesia is complete as soon as the skin becomes white and glistening.

Cold as an Antipyretic.—When the abnormal elevation of the temperature is due to insufficient radiation of heat, as in some nervous disorders, it is not generally in itself dangerous, for it has been known to reach 123° Fahr., and remain there for several weeks. But if, as in fevers, the rise depends upon excessive chemical changes, then the heat itself is injurious, causing arrest of gland-secretion, as well as extensive destruction of tissue. In every fever there is a certain point beyond which, if the temperature rises, certain structural changes will take place. The glands become affected with cloudy swelling, and fatty degeneration ensues, and the muscles affected in like manner become remarkably brittle. The point at which these changes occur differs in each fever. In scarlet fever it is 105° Fahr., in typhoid 106°, in relapsing fever from 107° to 108°, and in erysipelas still higher. Beyond this dangerous point in each fever the temperature should not be allowed to rise, but must be lowered by the use of cold, the result of which is simply abstraction of heat.

This may be effected by immersion in a cold bath or by the cold pack. Place the patient in a bath of 75° Fahr., and gradually cool the water down to 65° or 60°—never lower—and at the same time use cold affusions to the head continuously. At first, the temperature will rise slightly, owing to the blood being driven from the surface into the viscera, which are always a little warmer than the skin; but the bath should be continued until the temperature is reduced to 100°, provided that the fall be gradual—that is one degree in six, five, four, or three minutes. If it fall one degree in two and a half minutes, stop the bath when the temperature has reached 101°; for in most cases a further reduction of one degree will occur after the bath. If the fall in temperature during the bath be one degree in *two* minutes, the patient should be taken out at once, whatever the actual temperature may be; for in such cases there is danger of the subsequent fall becoming uncontrollable, reaching perhaps 97°, and the patient passing into collapse. Should this at any time occur, wrap him in hot blankets, apply hot saucers to the epigastrium, and give brandy or other stimulants. When, for any reason, the bath is impracticable, the cold pack may be used, always, however, with the same precautions as in the cold bath. First wrap the patient in a sheet wrung out of water at an ordinary temperature—say 70°,—and then lay on other sheets wrung out of iced water. The cold bath or pack should be repeated often enough to keep the temperature below the point of danger for that particular disease. If necessary, use one every hour. If, however, two or three a day are sufficient, one should be so timed as to be given just before the highest rise of the fever-heat—that is, usually, between two and three o'clock in the afternoon. The contraindications to the antipyretic use of cold are hæmorrhage from the bowels and notable variations of temperature from the regular course. Bronchitis and pneumonia are not necessarily contraindications.

Chloral in Puerperal Convulsions.—At the Paris Hospital Medical Society, M. Guyot stated that he had met with remarkable success in the use of chloral in the treatment of eclampsia. From January 1 to July 15 of last year he had met with fourteen cases in his lying-in ward, and of these thirteen recovered. The chloral had been administered as an enema, in doses varying from four to sixteen grammes in the twenty-four hours. In cases in which congestion existed, venesection was also practised.—*Gazette Hebd.*, March 5.

Boracic Acid in Purulent and Catarrhal Affections of the Eye.—In a communication to the *New York Med. Record* (February 7), Dr. Theobald, Surgeon to the Baltimore Ophthalmic Hospital, states that, having derived great advantage from the application of boracic acid in otorrhœa, he was induced to try it in affections of the eye attended with discharge, and has found it a most efficacious remedy. From its possessing only slight astringent power he is disposed to attribute much of its good effects to its antiseptic properties, with which is combined a certain amount of sedative or anodyne power, as shown in its operation in cases of scrofulous keratitis. He employs solutions of from two to four or more grains to the ounce, which are dropped into the eye three or four times a day. Even a saturated solution (twenty grains), when used in cases of gonorrheal ophthalmia, causes very slight irritation.

REVIEWS.

Skin Diseases: including their Definition, Symptoms, Diagnosis, Prognosis, Morbid Anatomy, and Treatment. By MALCOLM MORRIS, Joint Lecturer on Dermatology at St. Mary's Medical School, etc. London: Smith, Elder, and Co. 1879.

WE have seldom met with a more terribly systematic compendium than this "little work" by Mr. Morris, or one into which the author has infused so little individuality. Everything is arranged so neatly and precisely, sentences are rounded off with great care, and the teaching is dogmatic enough to suit any pedant; but closer examination shows that, though the words are the words of Morris, the thoughts expressed are mainly the thoughts of Hebra and Hutchinson. The work as a whole is what a druggist might call *extractum Hebræ aquosum*—a watery extract of Hebra's great *Lehrbuch*. Mr. Morris never refers, so far as we have observed, to his own experience of cases or treatment; and this tends to make his book very dry—more so than, we hope, his lectures are. In the Preface he tells us his object is "to supplement, not to supplant, existing treatises"; but we cannot understand in what way it supplements them, when it contains just what they do, only in a more condensed form, and fails to give us anything extra that is original. In what way, for example, does it supplement Neumann's or Duhring's treatises?

We will not, however, deny that Mr. Morris's is a good compilation, under certain limitations. In the first place, he has, at considerable length for a compendium even of medicine, at inordinate length for one of skin diseases only, described the acute specific diseases as if they were an integral portion of dermatology. Thus scarlatina gets seven and a half pages, variola nearly seven, and enteric fever between three and four pages; whereas a simple description of the diagnostic features of the rash in each case is all that the student of dermatology requires. Scarlatina is not a skin disease, small-pox is not a skin disease, and enteric fever (in which, in about 12 per cent. of the cases, there is no eruption at all) is as far as possible from being a skin disease. In small-pox, the secondary inflammation of the skin caused by the pustules may be a source of danger to the patient; in enteric fever, the few rose-coloured spots, which are often only to be discovered by careful search, never have the least influence on the disease, and merely serve to clench the diagnosis. No doubt Mr. Morris would say, "but Hebra describes scarlet fever, etc." True, but our objection applies equally to him. The dermatologist, as such, should study the essential diseases of the skin; roughly speaking, those which he meets with in a hospital skin department. At any rate he need not drag every disease in which the skin is possibly implicated into a treatise on skin diseases, and if he attempts to go outside his special beat he should be specially careful to avoid slipshod writing. Mr. Morris offends in this way several times. Speaking of scarlatina (page 42) he says, "Albumen, after two or three weeks' illness, should be constantly looked for, and the treatment regulated accordingly," but he gives "students and practitioners" no inkling how they are to regulate it. Of measles, he tells us (page 44), "the lung complication may require the administration of an emetic," but never suggests that milder measures should be previously tried. At page 60 he declares "the diagnosis of typhus from enteric fever is a perfectly easy matter," though it took able men years to establish the difference. Of enteric fever he asserts that its diagnosis "is usually not a difficult matter. The high temperature, the prominent abdomen, the dry red tongue, the diarrhœa, and, when present, the lenticular spots, conclusively point to the disease." But how if the temperature never be high, the tongue moist throughout, the bowels always constipated, the spots altogether absent? How about "ambulatory typhoid"? How about the cases that for days puzzle us and make us think of meningitis, tuberculosis, and various other febrile diseases? In a second edition Mr. Morris would do well, as we think, to omit the sections on acute specific diseases altogether, or if not, to get some general practitioner of medicine to protect him from talking of "the solitary glands of the *ilium*," and of uttering such platitudes as that "the morning temperature is lower (in enteric fever) than in the evening, and during the second and third week this is maintained," or such misleading statements as that on the same disease, "as age progresses mortality increases" (page 64)—the fact being that it only does so up to a certain point, approximately between twenty-one and twenty-five years, and then steadily diminishes. Mr. Morris's statement would give the idea that a man of sixty was more liable to enteric fever than one of twenty.

Turning now to the part of the book devoted to skin diseases proper, we shall, without entering into any very detailed criticism of it, repeat our previous statement, that as a compiler Mr. Morris has executed his work well, only—as compilers often do—he has slipped here and there, and he has rather given undue prominence to the less, and passed over some of the more, essential features of the subject. Thus he devotes whole pages to "morbid anatomy," generally without naming the source of his information, and ends the chapter with half a dozen lines on "treatment." Similarly the section on "diagnosis" is often scamped. The thing which a student most requires to know is how to distinguish one skin disease from another; the practitioner, in addition, wants to be told how best to treat the skin disease he has diagnosed. Except in relation to diseases due to animal and vegetable parasites, the "morbid anatomy" of skin diseases is of very little interest to the practical man. Moreover, nothing is more repulsive than a description of microscopic appearances, and Mr. Morris does not give a single plate under this heading. His book is said to be illustrated; but after Chapter I., on the anatomy of the skin, there is not an illustration; and what does a medical man care about the "prickle-cells" in Plate 3? Another point which strikes us is the way in which rare and common diseases are set side by side without sufficient intimation to the student as to which he should pay the most attention. Take, for instance, "rhinoscleroma" (page 221), which is called "a peculiar affection," but which Mr. Morris does not tell us, as he should, is unknown in English practice. The same may be said with almost equal truth of Hebra's lichen ruber and lichen scrofulosorum, for no one who has seen a case of the first at Vienna would ever confound it with Wilson's lichen planus. In the same way, in the section on Prurigo, why should Hebra's prurigo, which is rare, if not unknown in England, have a long description, and the common prurigo infantum so poor a one? *En passant*, we do not agree with Mr. Morris that prurigo infantum (prurigo *mitis* he calls it, on the *lucus a non lucendo* principle, because it makes the children's lives wretched) is "more common among the poor." The worst cases we have seen have been in the children of comparatively well-to-do people. In this section we miss an account of the affection described by Mr. Hutchinson as "winter prurigo," and by Dr. Duhring as "prurigo hiemalis." The separation of herpes (Chapter XI.) from herpes zoster (Chapter XVI.) seems quite arbitrary: one is as much vesicular, and probably as much neurotic, as the other. Herpes gestationis was first described not by Liveing and Bulkley, but by Hebra. The present writer reported a case from Hebra's clinic in the *Lancet* in 1871, which was afterwards copied into Dr. Tilbury Fox's large work on diseases of the skin. Mr. Morris repeats the worn-out fallacy (page 144) that the contagiousness of porrigo was discovered by Dr. T. Fox. Bateman noticed it long before him, as anybody can convince himself by reference to that author's work. On the other hand, we think some mention of Dr. Fox's name should have been made in speaking of cheiro-pompholyx, the name Mr. Hutchinson gives to Dr. Fox's dysidrosis. We have no wish to renew the controversy on this subject, but there are arguments which might be adduced in Dr. Fox's favour. Mr. Morris is also rather dogmatic when he says Addison's disease "is an affection of the supra-renal capsules." Certainly there have been cases of bronzing where these organs seemed quite free from disease.

Under diseases of the sweat-glands we are rather surprised to find lichen tropicus or prickly heat unmentioned. Surely Mr. Morris intends his work for use by army and navy surgeons. Under Alopecia the researches of Pincus are not noticed. The antiseptic treatment of whitlow after incision Mr. Morris will find much superior to the old system of poultices and astringent lotions.

In the section on Erysipelas also, earlier in the book, Hueter's treatment with hypodermic injections of carbolic acid is too valuable to have been slighted as it has been here. We scarcely think medicinal rashes have received full justice from Mr. Morris. He mentions quinine as sometimes producing a rash; but says the patches are transitory, and gives no account of the severe genera

symptoms which occur in specially predisposed individuals, the scarlatinal eruption and subsequent copious desquamation. In the same passage he speaks of an eruption being caused by "anæsthetics." Should it not read "narcotics," and does he not refer to chloral and opium? Under copaiba rash he forgets the important diagnostic hint that the patients are generally young men with guilty consciences and gonorrhœa, who have been treated by a druggist. Without this practical knowledge copaiba rash is apt to be very puzzling to beginners.

Here we must stop. We have ventured to criticise some parts of this manual in no unfriendly spirit, but rather to suggest future amendments. There is no doubt that, taken as a whole, considerable labour has been expended on it. There are extremely few typographical errors—a sure sign that the proof-sheets have been read with great care. If Mr. Morris could make his "dry bones live" in another edition, and introduce some good illustrative cases, and some ideas on treatment less suggestive of the routine practice of the skin hospital, he would produce a manual not only more useful to "students and practitioners," but also more attractive to them.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, FEBRUARY 24.

JOHN E. ERICHSEN, F.R.C.S., F.R.S., President, in the Chair.

CONTRIBUTIONS TO THE EXPERIMENTAL PATHOLOGY OF SPIRILLUM FEVER.—No. I.: ITS COMMUNICABILITY BY INOCULATION TO THE MONKEY.

DR. H. V. CARTER (Bombay) read this paper. The author's experiments were made by injecting the blood of fever patients beneath the skin of the common Indian monkey (*Mocacus radiatus*). Forty-four trials were made upon fifty-one of these animals. Of thirty-one inoculations made with spirillar blood, twenty-two were successful and nine failed. All nine inoculations of non-spirillar blood and seven of desiccated blood (mostly infective when fresh) gave negative results. Four injections made with the saliva of fever-patients and of a healthy man produced serious but non-specific results. These experiments are described in the first part of the present communication, and in the second they are analysed and discussed. The instances of failure with infected blood were those of inoculation at a period prior to the onset of fever, at the beginning of high fever, at the acme of attack with high temperature, and at the end also, when other blood-poisons co-existed with the spirillar. As to discordant results, it is stated that the balance of evidence is against the likelihood of infection during the non-febrile incubation period; and as to contagion being a disturbing influence, it was never proved during these experiments, though its possibility is admissible. Adverting to the positive series, it is first pointed out that the normal temperature of the monkey is about 3° Fahr. higher than that of man. The minor perturbations of body-heat after apparent failure of inoculation are alluded to, as possibly indicating quasi-abortive infection. As to general conditions, experiment was made from man to the animal, and from one animal to another, without any selection of cases. The pyrexia artificially induced corresponds with the first or invasion-attack of man, and differs only in its more varied form and briefer duration. Relapses were so rare and irregular in the monkey as to be plainly more incidental than in the human subject. It is especially pointed out that the sole febrile event may consist of a short and comparatively trivial rise of temperature, such as might be overlooked; this occurs only in the secondary attacks of man. The particular features of the pyrexia are next described in its beginning, course, and end. The maximum temperature attained (about 107° Fahr.) is the same in both man and animal, and so the form assumed of continued, remittent, or paroxysmal type. The abrupt onset and prompt termination of the attack are also alike, only the fall is not quite so marked in the lower creature. Rebounds of temperature or secondary fever were observed here as sometimes in man, and death may occur during this sequelar phenomenon. The post-mortem appearances noted in the bodies of animals at different stages of the fever are mentioned, the chief being inflammation of the stomach and small intestines throughout, with petechial extravasations beneath the serous and mucous surfaces. There follows a summary of microscopical observations of the blood. It is pointed out that the usual delineation of the spirillum as a rigid spiral filament does not represent the aspect of the active organism, but rather its quiescent state, for immediately on withdrawal the parasite is usually seen to be highly flexible, and to assume the forms of curved, knotted, or twisted filaments, or even of rings, such as neither the spirilla proper nor the spirochæte (of Ehrenberg) were ever seen to imitate. The abundant swarming and clustering of the filaments are here at least as striking as in the relapsing fever of man, and the organism is apparent the same. Multiplication by mid-fission, and the growth from small round particles, were clearly indicated. Special inquiries were made regarding the state of the blood issuing from the spleen, liver, lungs, kidneys, etc., during fever, and it would seem that in splenic venous blood the parasite most abounds, being probably developed within the endothelial and white blood-cells. Another point of interest determined is the constant presence of the blood spirillum during the latter part of the incubative period of fever. This has been established for man as well (for the first relapse), and hence the proposed division of all pre-febrile periods (or apyretic intervals) into a non-spirillar and a preliminary infective stage; symptoms (premonitory of febrile exacerbation) may or may not be detected at the latter stage. The author finds that the severity of the comparative attacks is not indicated by the length of incubative period. Intensity of infection increases by repetition. Even in man the blood at invasion-attacks is not so active as that of relapses, and the monkey's blood at second remove from man was found to produce a fatal result in the two instances it was made use of. Lastly, a note is appended in the connexion between the results of inoculation and of artificial culture of the blood, it being pointed out that the infective quality of the blood, as represented by the parasite it contains, corresponds in some degree to the readiness of this organism to grow and multiply outside the body. The spirillum may be readily induced to develope into a mycelioid form of great luxuriance and beauty. The main conclusions arrived at are:—1. That the spirillum fever (relapsing fever) of man is directly transmissible to a quadrumanous animal; 2. That there occurs a non-febrile infection of the blood prior to "fever"; 3. That though the blood spirillum was never seen in the monkey without fever ensuing, sooner or later, yet the pyrexia is secondary in time and is susceptible of highly varied manifestation; and the spirillum disease may be defined as essentially a *mycosis sanguinis cum febre*. Charts and specimens of blood accompany this paper, and it is mentioned that the inoculation experiments have been repeated in Germany with success (*vide* the *Deutsche Medicinische Wochenschrift*, Berlin, No. 25, dated June 21, 1879, page 327).

SIR JOSEPH FAYRER said that both Dr. Carter and Dr. Lewis had investigated the subject, the latter especially during the time of the last famine. Dr. Lewis had come to the conclusion that the appearance of the spirilla was no essential part of the disease. There was nothing in the experiments related which went to show that the spirillum was the cause of the fever, but Dr. Carter was not a man likely to arrive at a premature conclusion on the subject.

DR. ANDREW thought that the paper tended to show the identity of the relapsing fever in India with that of Europe.

DR. JOHN HARLEY had examined the specimens of blood sent by Dr. Carter from India, and had found in them two forms of fungus, showing in some instances spores and a radiating mycelium closely resembling the objects described as spirilla. It was questionable whether that which was described as spirillum was really the same thing as that described by botanists.

DR. ANDREW said that it was not possible to judge by dried specimens of what might exist in recent blood.

SIR JOSEPH FAYRER said that Dr. Carter was too careful to have neglected any precautions in making his examinations.

CONTRIBUTION TO THE NON-GLANDULAR THEORY OF MOLLUSCUM CONTAGIOSUM.

MR. SANGSTER read a paper on the above subject. He said that molluscum contagiosum is still looked upon in the country as a disease of the sebaccous glands. The disease is a well-

marked one, and from description it is clear that authors who have treated of its pathology have been perfectly familiar with its appearances; hence an additional difficulty in accounting for discrepancies in opinion, as error in diagnosis is almost impossible. As long ago as 1815 Virchow stated his belief that the disease had nothing to do with the sebaceous glands, that it was due to hyperplasia of the cells of the rete, at the mouths of hair follicles; he called it "epithelioma molluscum." C. Boeck in 1875 turned his attention chiefly to the notice of the molluscum bodies; he arrives at no definite conclusion, but shows them to be due to degeneration changes (affecting the nucleus first) in cells which are identical with rete cells, the change being neither fatty nor amyloid. Labowsky (1875) showed the epidermal nature of the disease. and believes the molluscum bodies to result from degenerative changes in wandering cells in the rete. An attempt is made by the author to support the theory advanced by the continental observers; moreover it is shown that the peculiar degenerative change (molluscum bodies) has to do with the superficial layers (granular and corneous) of the epidermis. Reference is made to specimens prepared from the earliest molluscum lesion obtainable. By a vertical section through a small molluscum tumour traversing the umbilication or central depression, the rete is seen in direct continuity with the longitudinally divided lobular expansions of the new growths—that part which has undergone molluscous change (molluscum bodies) is clearly demonstrable by its different behaviour to logwood. Lobular masses of new growths having a deceptive gland-like character appear isolated, being in fact outlying expansions from the main body of the growth transversely divided. The next specimen referred to is a vertical section through a minute molluscum, the section being made remote from the "umbilicator" or central depression; no communication of the new growth with the surface is seen. Three distinct regions of the growth are recognisable:—1. Peripheral rete-like cells; those marginally placed being elongated and vertical. 2. Nearer the surface, as seen, translucent, vitreous-looking molluscum bodies, lying in the meshes of a granular reticulum; this in places becomes continuous with groups of diamond-shaped granular cells, exactly similar to those of the granular layer seen in the normal epidermis. 3. More superficially placed are transparent structureless molluscum bodies lying in apposition. Other specimens are figured, and from appearances the conclusion is drawn that molluscum contagiosnm is a disease of the epidermis in which three layers take part. The cells of the rete go to form the peripheral portions of a molluscum growth; the changes affecting them are probably simply hyperplasic, and consequent upon the peculiar molluscous change (molluscum bodies). The cells of the granular layer degenerate and form the deep molluscum bodies; those more superficially placed being associated with the corneons layer. If the peculiar changes of molluscum contagiosum take place in the grannlar and corneous layers, it is argued that the disease can have nothing to do with the sebaceous glands, in which structures these layers are not represented. Molluscum bodies are shown lying amongst prickle-cells, another proof of their epidermal origin.

Mr. Jonathan Hutchinson thanked Dr. Sangster for the clear way in which he had put forward his view that molluscum contagiosum was not a sebaceous disease. In another Society an opposite view had been maintained. The umbilical orifice of the growth appeared to be perfectly natural, and not the result of the bursting of an abscess or the like; and from this, sebum, or something like it, could be pressed. These growths were never found on the palms of the hands or the soles of the feet, where there were no sebaceous glands.

Dr. Thin thought that the sections shown by the late Dr. Tilbury Fox agreed with those exhibited by Dr. Sangster, the only differences arising from the direction in which they were made. The molluscum bodies did not arise in the sebaceous glands, but in the rete mucosum; and all skin-glands had their origin in prolongations of the epidermis downwards.

Dr. Dyce Duckworth had held the view that molluscum contagiosum originated in the sebaceous glands, and he thought the contents fatty or allied to fat. Dr. Sangster's specimens, however, required careful consideration.

Dr. Sangster, in reply, pointed out that the growths were in connexion with the hair follicles, and so depressed below the surface. He thought the contents were not fatty, though they had not been analysed. He had never seen sebaceous glands in any apparent connexion with the new growths.

CLINICAL SOCIETY OF LONDON.

Friday, February 27.

E. H. Greenhow, M.D., President, in the Chair.

A Case of Retention of Urine from a Calculus impacted in the Membranous Urethra, relieved by Pushing back the Stone into the Bladder with a Wax Bougie and Crushing it.

Mr. Teevan related the particulars of this case. He stated that it had always been his practice, when a calculus was impacted in the deeper portion of the urethra, to try and push it back with a wax bougie into the bladder, and there to crush it. It appeared from a perusal of English works on surgery that the above practice, so well known in Paris, was unknown here. The recommendation in English books to push back the calculus with a silver catheter generally failed, as the opposed surfaces of the stone and catheter were usually convex; hence the catheter, instead of pressing against the calculus, attempted to pass by it, thus driving the stone into the wall of the urethra. Even if the catheter was truncated it was not more useful, for the surface of the calculus was usually irregularly convex, so that it did not fit into the end of the instrument, and thus it was that no efficient pressure could be made. A wax bougie, however, fulfilled all indications. If it were slightly warmed before using it, and one end curved, it would, when arrested by the stone, become accurately moulded and fitted to the surface of the calculus, so that the two bodies virtually became one, and the surgeon could exercise gentle, firm, and efficient pressure.

A Case of Paraplegia from Pott's Disease, treated by Sayre's Splint—Intestinal Obstruction—Death from a Kink in the Duodenum.

Dr. Buzzard read a paper on this case. The patient was a labourer, aged twenty-two, employed in carrying heavy sacks, who, after suffering from pain in the back, lost the use of his legs in December, 1878, and was admitted into the National Hospital for the Paralysed and Epileptic, under Dr. Buzzard's care, in April, 1879. On examination it was found that in the mid-dorsal region there was an angular curvature, of which the sixth dorsal spine formed the apex, the curve extending from the fourth to the tenth dorsal vertebra. There was absolute paraplegia, with anæsthesia, of all parts below a line encircling the body two inches beneath the nipples, and incontinence of dejectum. On April 24 the patient was slung, and Sayre's plaster jacket applied. This was found to be comfortable. On April 30, after indulging freely in dough pudding, the patient was seized with discomfort and vomiting. As an ordinary enema failed to give relief, the plaster casing was removed. There was abdominal distension with tenderness, especially in the epigastric region, and percussion appeared to show that the stomach was distended. Morphia and atropine were employed hypodermically, but the symptoms of obstruction continued, and death took place after they had lasted only sixty-eight hours. The vomiting was never fæcal in character. Autopsy showed the spinal dura mater thickened and adherent to the anterior wall of the canal in the region of the curvature, where the bodies of two vertebræ were disintegrated, and abscesses corresponding to them were found about the column when the chest was opened. The cord was bent upon itself at an angle of 125°, and at this part had lost its natural firmness. Microscopically, evidence of diffuse myelitis was discovered, with secondary degenerations, extending to either extremity. On opening the belly, the stomach and duodenum were found enormously dilated, and the last part of the duodenum folded down upon itself, the whole intestinal canal below this point being contracted and containing scybala. Dr. Buzzard remarked that the origin of the disease was clearly traumatic, the cause being, as in the case of another patient of his at the same time in hospital, the carrying of heavy sacks. This accorded with Dr. Sayre's experience as to the etiology of Pott's disease. The object sought in employing the splint was that the patient might enjoy the best possible condition for anchylosis without the necessity of keeping his bed, and it was carefully and skilfully applied. The point of special interest was with regard to the question whether the casing had conduced to the kink in the bowel. The situation of the latter was uncommon, and attributable to

interference with the natural peristalsis. With so complete a paraplegia the innervation of the intestines was probably to some extent troubled, and it was conceivable that when the ribs were fixed and the stomach distended, the jejunum might easily, during the descent of the diaphragm in inspiration, get forced downwards, and thereby bent upon the duodenum, which was not free to move on account of its attachments. The peristaltic action which was necessary for the unfolding of the gut might be either deficient or unable to be exerted successfully from the relations of the parts to the rigid casing which embraced the abdomen as well as the chest. Dr. Buzzard reserved his opinion as to whether or not this had happened in the present instance, but he thought it important to put the case on record. The incident, of course, may have been a simple coincidence. He referred to a case published by Mr. Willett in vol. xiv. of *St. Bartholomew's Hospital Reports*, in which fatal vomiting followed the application of the plaster-of-Paris bandage in a case of spinal curvature. The stomach in that case, as in this, was found enormously dilated; but, further, it was thought also to show evidences of old disease, and it did not appear that any obstruction in the intestinal canal had been discovered. As regards the obstruction in the present instance, Dr. Buzzard remarked that its nature would have peculiarly fitted the case for operative interference, but he left it to the surgeons to say whether its position (at the third portion of the duodenum) would have proved or not a bar to successful gastrotomy.

The President thought it difficult to imagine that so considerable an amount of spinal curvature could be produced by a cause so simple as that described in the paper.

Dr. Duckworth asked if the intestines had been opened post-mortem. He had more than once been compelled to remove the plaster bandages soon after application.

Mr. Heath was of opinion that the injury was not correctly described as a kink of the duodenum, since it really was in the jejunum. It was, he continued, a well-known fact that this point of the intestine, close to the mesenteric artery, was excessively liable to injury by tearing, etc. For this there was a mechanical reason; the duodenum being firmly attached, while from it depended the freely movable intestines. He could not agree that the pressure on the body produced by the jacket would suffice of itself.

Mr. Marsh did not think that the scrofulous diathesis should be entirely omitted from the list of causes predisposing to spinal disease. He thought that, in dealing with cases of intestinal obstruction, time ought never to be lost; the safety with which an operation could be performed, as well as the danger incurred by delay, serving to indicate its early performance. Concerning the tightness with which the bandage fitted, much misconception existed. In the majority of cases, as much as a fourth of an inch of space separated it from the body; and the introduction of the dinner-pad was another security against compression of the walls of the thorax.

Dr. Duffin mentioned the case of a post-office official who presented an angular curvature involving the ninth, tenth, and eleventh dorsal vertebræ. The angle was very marked. Sayre's jacket was applied, and the patient kept in bed. When the bandage was removed, he applied the actual cautery, repeating the treatment with much success.

Mr. Barker said that, by pressing on the dura mater, the abscess could produce an influence on the cord. He thought that, during the fitting on of the plaster casing, the body being straightened, the thorax was disturbed, and pressure on the abdomen was relieved. The thorax subsequently shrank, and left room for the respiratory movements. He did not think the functions of the bowels were in any way interfered with by the casing.

Dr. S. Coupland thought it desirable to operate early in cases of acute intestinal obstruction.

Mr. Walsham had recently made some experiments to determine whether the hand could trace the direction in which it was exploring when proceeding along the intestine. He came to the conclusion that it could not be mistaken when going towards the duodenum. He believed the disease originated in the joints, and not in the substance of the bone.

Mr. Howard Marsh thought that the thorax was drawn down during suspension of the patient. Hence, being released from the apparatus of support, the bandage would be perceptibly tighter.

Mr. Barker assumed the patient to be suspended, not by the head alone, but with the support afforded by arm-slings.

Dr. De Havilland Hall mentioned a case in which a patient died through rupture of the ileum, which was preceded by the descent into it of a large gall-stone.

A Visitor had recently seen a case which tended to prove that spinal disease might originate traumatically. The patient dated the affection from the time of receiving an injury, angular curvature following recovery.

Dr. Buzzard said microscopic sections of the cord had been made, and there had been found marked sclerosis. There was much hypertrophy of connective tissue, and general overgrowth. At the point where the cord was softened, the axis-cylinders were few; but there were numerous vacuous and medullary fibres, and the appearance of transverse interstitial myelitis involving the lateral and posterior columns. There was no history of traumatism, of scrofula, or of phthisis. At the same time as he was treating this case, he had another patient under observation. He, likewise, was a healthy labourer, accustomed to lifting heavy sacks. In the case reported to the Society, the point at which the gut was folded presented no ulcer or other pathological change, except a hyperæmic condition. He thought the delayed operation for intestinal obstruction justified by the conditions. It was not unreasonable to suppose that the obstruction arose from the food taken in such quantity. In making the post-mortem examination, the spinal canal was first opened, and the pus found was excessively inspissated. The patient was treated on account of paraplegia which preceded the application of the jacket.

Molluscum Fibrosum.

Dr. Sangster read notes on a case of molluscum fibrosum, of which the following is an abstract:—The patient, J. S., aged fifty, was small in stature, but by no means stunted or ill-developed. There was nothing of interest in his family history. One of his children was said to have been born with a tumour on the penis similar to those on the patient's body. The first tumour appeared on the patient when he was twenty-three years old. According to his statement—one which can scarcely be credited—his body was covered at the expiration of a year from the appearance of the first tumour. The face had been attacked more recently. The trunk was most affected, hundreds of molluscum tumours being seen in front and behind. They presented the usual diversity as to size, shape, mode of attachment, etc.; some were so closely packed that their apposed surfaces were flattened. They appeared to congregate especially round the nipples and in the groove between the erector spinæ muscles. The extremities were affected in a lesser degree. The scalp presented many tumours, and—a point of great interest—there were tumours on the right sole and palm. One tumour was pendulous and flaccid, as large as a small orange; it felt like a varicocele. The skin everywhere was dusky and muddy-looking; there was clearly much disturbance of pigment, brown vascular patches of all sizes being scattered over the surface. A small tumour was noticed on the hard palate behind the central incisors. Variously sized tumours were excised for examination, together with some minute papular elevations with comedo-like orifices, which appeared to be the earliest lesions. Dr. Sangster added that the comedo-like spots are easily recognised. On pushing the skin about the tumour, it puckers up, thus indicating its deep origin. The Germans averred that the sebaceous glands are not involved, but he (Dr. Sangster) thought the microscopic sections he exhibited would prove that these structures are not inert during the production of the diseased growth. The patient shown before the Society had some of these tumours on the plantar surface of the foot, and this led him to think that the growths are connected with both the glands and the skin.

Royal College of Surgeons.—At the Preliminary or Arts Examination for the diploma of Fellowship and Membership of the College, which was brought to a close on Friday last, there were 106 candidates for the first-named examination, and 281 for the second, making a total of 387.

Railways and Ambulance Work.—In the Locomotive Department of the London and North-Western Railway Company at Rugby a class for *employés* in that department, instructed under the St. John Ambulance Association, has so well succeeded in passing the required tests that every pupil who presented himself for examination obtained a certificate of proficiency.

OBITUARY.

EDWARD COPEMAN, M.D., F.R.C.P.Lond., F.R.C.S.Eng.

Dr. Copeman, whose death we briefly noticed last week, was the son of a merchant, and was born at Great Witchingham, Norfolk, in December, 1809. He was articled to Mr. A. Brown, of Norwich, and on the death of that gentleman, two years later, was transferred to the celebrated surgeon, Mr. J. G. Crosse. Having served his apprenticeship and acted as a dresser at the Norfolk and Norwich Hospital, he entered as a pupil at St. George's Hospital, London, in 1831 became a Licentiate of the Society of Apothecaries, and in 1832 obtained the Membership of the Royal College of Surgeons; and then was appointed House-Surgeon to the Norfolk and Norwich Hospital. He afterwards settled as a general practitioner at Cottishall, near Norwich, where he carried on a large practice and acquired considerable reputation. In 1845 he became a Fellow of the Royal College of Surgeons by examination. In 1847 he took the M.D. degree of Aberdeen, and in 1848 removed to Norwich and established himself there as a physician. In 1859 he became a Member, and in 1871 a Fellow, of the Royal College of Physicians of London. He was elected Physician to the Norfolk and Norwich Hospital in 1851, and held the office till 1878, when he resigned, and was elected Consulting Physician to the Hospital. He held also other important professional appointments. He was Physician to the Norwich Eye Infirmary and the Norwich Magdalen; Consulting Accoucheur to the Norwich Lying-in Charity, and the first Physician to the Jenny Lind Infirmary for Children, of which charity he was, we believe, one of the founders.

Dr. Copeman achieved great success as a practitioner; and he also made many valuable practical contributions to medical literature. His first work was a treatise on Apoplexy; and he wrote also on Diphtheria, on the Cerebral Diseases of Infancy, and on Obstruction of the Bowels; but he was best known by his contributions to the art and science of gynæcology. He edited "Crosse's Cases in Midwifery," and published "Records of Obstetric Consultative Practice," some "Illustrations of Puerperal Fever," and a contribution on "Flooding after Delivery." Lately he had called the attention of the profession to the great value of the treatment of the vomiting of pregnancy by dilatation of the os uteri; and this mode of treatment has attracted considerable attention, and been adopted with much success in England, on the Continent, and in America.

Dr. Copeman was an enthusiastic and accomplished musician, and a violoncello-player of no little merit. For many years he was Chairman of Sub-committee of Management of the Norwich Musical Festivals, and when he retired from that post a few years ago he was presented with a handsome silver tea and coffee service as a testimonial of regard.

Dr. Copeman had for some time been failing in health, but continued to practise his profession till the day before his death, which took place on February 25 from an attack of cardiac dyspnœa. He was held in very high esteem, wherever he was known, as a warm friend and high-minded gentleman, as well as an able and trusted physician; and two or three days after his death the Board of Management of the Norfolk and Norwich Hospital unanimously passed a resolution expressive of their high appreciation of the value of his services to the charity, of the warm esteem in which he was held, and of their profound sympathy with his family.

DAVID FIDDES, M.D. Aberd., M.R.C.S.E.

We regret to have to record the death of Dr. David Fiddes, one of the oldest and best known of the members of our profession in the city of Aberdeen. The fatal event took place on Wednesday, the 25th ult., and was due to an attack of pneumonia of only a few days' duration. The deceased gentleman, however, who was sixty-eight years of age, had never recovered his wonted vigour and activity since the beginning of 1879, when he was prostrated for some weeks by rheumatic fever. Dr. Fiddes was a native of Aberdeen, in the seminaries and University of which he received his general and professional education—the latter being extended by study elsewhere. He took the M.R.C.S. of England in 1832, and after doubling the Cape and visiting the East Indies several times in the capacity of a ship's surgeon, he settled in his native city, where he gradually acquired a large and lucrative practice. He took the M.D. of his University in 1843. Dr. Fiddes was particularly fond of the surgical departments of professional work, and for many years was one of the Surgeons to the Aberdeen Royal Infirmary, having as colleagues there on the surgical staff the late Drs. Keith and Kerr, and Professor Pirrie, the present well-known occupant of the Surgery chair in the University of Aberdeen. A few years ago Dr. Fiddes retired from the duties of Acting Surgeon and was elected a Consulting Surgeon to the Infirmary. He was also, at various times, connected professionally with several other public and charitable institutions in the "granite city." For this reason, and from the fact that his kindly and unassuming demeanour, his genial social qualities, and his professional ability, won for him the respect and esteem of all with whom he came into contact, his death will be very generally felt in his native town and the neighbourhood. Dr. Fiddes was never married, but he leaves a few near relatives as well as a very wide circle of both lay and professional friends to mourn his loss.

MEDICAL NEWS.

Apothecaries' Hall, London.—The following gentleman passed his examination in the Science and Practice of Medicine, and received a certificates to practise, on Thursday, March 4:—

Waterhouse, George Beadmore, London Hospital.

The following gentlemen also on the same day passed their Primary Professional Examination:—

Fotherby, Henry Arthur, Guy's Hospital.
Sykes, Matthew Carrington, St. Bartholomew's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to all new Appointments that take place.

Murphy, James, M.D., B.A. Dub.—Surgeon to the Sunderland Hospital for Women and Children, *vice* R. A. Smith, M.B., resigned.

NAVAL, MILITARY, &c., APPOINTMENTS.

Admiralty.—The under-mentioned Fleet-Surgeons have been promoted to the rank of Deputy Inspectors-General of Hospitals and Fleets in her Majesty's Fleet, with seniority as stated against their names:—John Cotton, M.D., February 26, 1880; James Nicholas Dick, February 26, 1880.

BIRTHS.

Bateman.—On March 2, at Whitchurch, Oxon, the wife of Francis Bateman, M.D. Lond., of a daughter.

Causton.—On February 29, at 1, Pomona-place, Hammersmith, W., the wife of William H. Causton, M.R.C.S., of a son.

Douglas.—On March 6, at Tantallon, Bournemouth, the wife of Justyn George Durham Douglas, M.D., of a son.

Ducat.—On March 4, at Gloucester House, St. Paul's-road, Highbury, N., the wife of Andrew D. Ducat, M.D., of a daughter.

Duncan.—On March 3, at 139, Buckingham-palace-road, S.W., the wife of H. M. Duncan, M.D., of a daughter.

Giffard.—On March 6, at Aldeburgh-on-Sea, the wife of Douglas W. Giffard, M.R.C.S., of a son.

Hill.—On March 4, at Turcoleah, Chumparun, Bengal, the wife of James H. G. Hill, M.D., of a daughter.

Stocker.—On March 7, at 2, Montagu-square, the wife of J. S. Stocker, M.D., of a son.

Wilkinson.—On March 3, at Ashford, Kent, the wife of J. Cooper Wilkinson, M.R.C.S., of a son.

MARRIAGES.

Bentley—Butler.—On March 4, at Park, Templemore, Arthur James McDonald Bentley, M.B., to Letitia Gertrude, eldest daughter of the late William Butler, Esq., of Park, co. Tipperary.

Duke—Cardinall.—On March 3, at South Lambeth, William Alexander Duke, Surgeon Army Medical Department, to Edith, youngest daughter of the late J. Cardinall, Esq., of Halstead, Essex.

Farrar—Powers.—On March 1, at Richmond, Surrey, Charles Farrar, M.D., of Chatteris, Cambridgeshire, to Fanny Louisa, widow of the late John Edwin Powers, Esq., of Biggleswade, Beds.

DEATHS.

Ayre, Mary Fidelia, daughter of John J. Ayre, M.R.C.S., of Coln, Lancashire, at Southport, on February 5.

Cohen, Daniel Whitaker, M.D., at South Bank, North Down, Bideford, Devon, on February 28, in his 68th year.

Cornish, Jane, wife of Charles Henry Cornish, F.R.C.S., Mayor of Taunton, at Taunton, on March 7, aged 67.

HITCHEN, CHARLES HENRY, M.D., late Major 2nd Administrative Battalion C.R.V., at Newton Hall, Newton-by-Frodsham, Cheshire, on February 20, aged 53.

JACKSON, ELIZABETH, wife of Hugh Jackson, Esq., and eldest daughter of Thomas Graham Arnold, M.D., of Stamford, at Sevenoaks, on March 6, in her 82nd year.

MACALDIN, JAMES JASPER, M.D., at 15, Tavistock-square, London, W.C., on March 2, in his 69th year.

WALKER, ALFRED, M.D., late of Hertford, at 9, Palace-road, Upper Norwood, on March 3.

WILSON, JOHN, M.D., of Woodcliff, Inverness, at Edinburgh, on February 17, aged 60.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

COUNTY AND COUNTY OF THE BOROUGH OF CARMARTHEN INFIRMARY.—House-Surgeon. He must be unmarried, and have a knowledge of the Welsh language, and be registered to practise both in medicine and surgery. He will have the privilege of taking two apprentices, and must agree not to practise in the county of the borough of Carmarthen for a period of five years from the day of his election. Applications, with testimonials, to be sent to the Secretary, Mr. H. Howells, 58, King-street, Carmarthen, on or before March 31.

GREAT YARMOUTH HOSPITAL.—House-Surgeon. Candidates must be unmarried and duly registered to practise medicine and surgery. Applications, with testimonials, to be sent to R. R. B. Norman, Esq., Hon. Secretary, on or before March 18.

LONDON LOCK HOSPITAL (FEMALE DEPARTMENT), WESTBOURNE-GREEN, HARROW-ROAD, W.—Assistant House-Surgeon. Candidates are requested to send in their applications, with testimonials, to G. F. Fred. Abraham, Esq., Secretary, on or before March 17.

NEWPORT (MON.) ODD FELLOWS' MEDICAL AID ASSOCIATION.—Assistant Medical Officer. Candidates must be doubly qualified. Applications, with testimonials, to be sent to the Secretary by March 20.

SCARBOROUGH UNION.—Medical Officer and Public Vaccinator. Candidates must be duly registered and able to produce a certificate of proficiency in vaccination. The election takes place on March 18. Applications, with testimonials, to be sent to Mr. W. O. Woodall, Clerk to the Guardians, on or before March 17.

STOCKPORT INFIRMARY.—House-Surgeon. Candidates must be doubly qualified and registered. Applications, with testimonials, to be sent to S. W. Wilkinson, Esq., Hon. Secretary, on or before March 13.

WARWICK COUNTY LUNATIC ASYLUM.—Junior Assistant Medical Officer. Candidates must not be over twenty-five years of age, unmarried, and qualified in medicine and surgery. Early application, with testimonials, to be made to the Medical Superintendent, The Asylum, Hatton, Warwick.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Bellingham Union.—Dr. J. Hill has resigned the First District and the Workhouse: area 6735; population 1314; salary £15 per annum. Salary for Workhouse £17 per annum.

APPOINTMENTS.

Caistor Union.—Alfred Allen, M.D., M.C., to the Keelby District.

Frome Union.—Thomas Howlett Worger, M.R.C.S. Eng. and L.S.A., to the Kilmersdon District.

Halifax.—Mr. Wm. H. Wood as Analyst for the Borough.

Hartlepool Union.—J. W. Crowe, L.K.&Q.C.P. Ire., L.R.C.S. Ire., to the Hartlepool District and the Workhouse.

Penistone Union.—Wm. Gruggen, L.K.&Q.C.P. Ire., L.F.P.&S. Glasg., to the Silkstone Union.

St. Mary (Lambeth) Parish.—John W. Robinson, M.D. St. And., M.R.C.S. Eng., L.S.A., to the Old Princes-road Workhouse.

Shipston-on-Stour Union.—Henry F. Eastall, M.R.C.S. Eng., L.S.A., to the Halford District.

Tavistock Union.—William C. Northey, M.R.C.S. Eng., L.S.A., to the Tavistock District and the Workhouse.

THE INDIAN MEDICAL DEPARTMENT.—"The publication of the reorganisation of the Medical Department in India, in the *Gazette* of January 3, is not likely to bring much in the shape of a New Year's gift to many in the Services. Still less will Peace and Goodwill result from a retrenchment among the few remaining prizes, so inauspiciously heralded at this season; while its completion being deferred to March 31 is suggestive. Whoever has advised the Government in this matter will have much to answer for. It seems so wonderful that the very moment when a new Warrant has settled the just claims of the sister service, and contentment might have been hoped to succeed a dissatisfaction of several years, the agitation has been wilfully re-awakened and transferred to the Indian Medical Department. It may confidently be predicted that all the popularity, the choice of the schools, and the ability will now crowd the Army Medical Department; that the Indian Medical Service will be coldly refused by candidates; and that a few years hence, when irreparable mischief has been done, the present parsimony will have to be redeemed by a tenfold more liberal concession."—*Indian Med. Gaz.*, February.

AT the meeting of the Consett Local Board held last week a letter was read from Mr. Wilson, of Shotley Hall, threatening to ask for the interference of the Local Government Board if the practice of emptying the sewage of the district into the river Derwent were persisted in.

ADMINISTRATION OF DESICCATED BLOOD BY THE RECTUM.—As the result of a prolonged investigation, Dr. F. E. Stewart, of New York, strongly recommends (*New York Medical Record*, January 3) the employment of blood promptly desiccated at a low heat and administered by the rectum as an auxiliary to digestion by the stomach when the life-powers are threatened by asthenia due to loss of blood or loss of nerve-power, or both. Dr. Andrew Smith also, who has been experimenting with defibrinated fluid blood at St. Luke's Hospital, has now substituted desiccated blood, and regards it as equally useful. The blood should be obtained from healthy bullocks, killed by bleeding to death, and should be dried as rapidly as possible at a temperature not above 110° Fahr. So prepared it is readily soluble in water at all temperatures below 160° Fahr. A little more than a drachm of the dried powder represents a fluid ounce of blood, and may be dissolved for use in an ounce of water. It should be thrown into the water and allowed to stand until the albumen becomes perfectly soft, to prevent its sticking to objects; and gentle agitation will then convert it into a homogeneous fluid closely resembling fresh blood. From four to six drachms or more of the powder may be given at bed-time or in divided doses. If more than can be absorbed has been injected, and decomposition ensue, the rectum should be washed out with tepid water before renewing the injection.

COMPOSITION AND QUALITY OF THE METROPOLITAN WATERS IN FEBRUARY.—The following are the returns (by Dr. Meymott Tidy) of the Society of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, etc.	Nitrogen: As Nitrates, etc.	Ammonia.		Hardness. (Clarke's Scale)	
				Saline.	Organic.	Before Boiling.	After Boiling.
Thames Water Companies.	Grs.	Grs.	Grs.	Grs.	Grs.	Degs.	Degs.
Grand Junction ...	23·51	0·0122	0·195	0·000	0·0075	15·9	3·8
West Middlesex...	22·87	0·0204	0·180	0·000	0·007	15·9	3·8
Southwark and Vauxhall ...	22·53	0·0612	0·165	0·001	0·012	15·0	3·8
Chelsea	23·49	0·0378	0·180	0·001	0·008	15·6	4·2
Lambeth	23·22	0·0163	0·180	0·000	0·005	15·4	4·0
Other Companies.							
Kent	33·74	0·0082	0·420	0·000	0·002	20·6	6·3
New River ...	23·14	0·0041	0·195	0·000	0·005	15·4	3·5
East London ...	23·06	0·0326	0·180	0·0015	0·010	16·0	4·2

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours. The water was found to be clear and nearly colourless in all cases but the following, when it was slightly turbid—namely, in that of the Southwark and Vauxhall and the East London Companies.

DR. TUSON'S BULLET EXTRACTOR.—"Deputy Surgeon-General J. E. Tuson, F.R.C.S., is the inventor of a very complete and ingenious bullet extractor, and a specimen has been forwarded to the principal medical officer at Kabul, who is likely to have ample occasion for testing its merits. The bulbous point is divided into three feelers, which are expanded by a screw adjustment near the handle, and each jaw is armed with a pin to press still closer their grasp of the foreign body. A central screw passes within the shank of the extractor, and can be worked behind the handle, so as to steady it during extraction along the axis. Besides these, which are the main features of most bullet-forceps, Dr. Tuson's can be armed in addition with a porcelain-tipped probe for searching whatever has been grasped by the extractor, and for making certain that what is held is lead, and not a condyle or splintered bone, for example; and lastly, there is the common electrical conductor and bath, which would also be so valuable as a metallic indicator. All is complete in a small and secure case; and although it is probable that in these days of rifle-fire on both sides the lodgment of bullets is comparatively infrequent, yet every Field Hospital ought to have such an instrument in store. For certainly it has many great advantages over those ordinarily in the service, and a valuable life might occasionally be saved by special means. Of those who die of wounds a week after battle, a considerable proportion do so from unextracted bullets; and many recent discoveries

would justify greater boldness in the search. The confidence given to a surgeon who knew he could hold the foreign body would tend to much greater boldness in reaching the missile, and perhaps saving a life, rather than the euthanasia which can alone be prognosed by leaving it alone."—*India Med. Gazette*, February.

LISTERISM IN INDIA.—The *Indian Medical Gazette* (February 2), noticing the welcome fact that antiseptic surgery has "at length won for itself more than tolerance in London," adding that "this measure of recognition will, we feel assured, ere long be followed by its final triumph and all but universal adoption," offers the strongest possible testimony in its favour, founded on the experience of its employment in Calcutta. "We have long held, from personal observation and experience, that Listerism constitutes an immense improvement in surgery and a great boon to humanity, and in the principal surgical hospital of this city a signal illustration of this truth has been given. Under surgeons of singular eminence and skill, the results of surgery in the Medical College Hospital were, not many years back—to use a mild term—most discouraging. Gangrenous cellulitis and osteitis, septicæmia, pyæmia, and the worst forms of erysipelas followed almost every entry of instruments into the tissues. The hospital was blamed, and nothing short of its demolition and the building of a new hospital on a better site and improved principles would, it was held, prove of any avail. *Now* wounds and sores heal kindly, and operations succeed, patients recover in a manner eminently satisfactory, and hospitalism has almost vanished. No great change in hospital arrangements has taken place; diet and stimulants have been less liberal than in those days. The improvement is entirely due to antiseptic surgery, and the more closely Listerism has been followed the better the results. The time has now come when the system should be adopted in its purity and totality in every hospital in India. It is capable of effecting a great saving of suffering and life, and the additional expense caused by it is, under careful management, by no means formidable."

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—Bacon.

London Cottage Mission.—The managers earnestly appeal for help to enable them to continue as long as possible the weekly Irish-stew dinners which have during so many weeks been of immense service and health-giving value to the children of the East-end of London. We again commend this Mission to the kind consideration of our readers, and hope they will aid the London Cottage Mission to continue this form of help; but unless the Mission receives support this department of work must be discontinued. Any contribution will be thankfully received by Miss F. Napton, 304, Burdett-road, Limehouse, E., and by Mr. Walter Austin, at the office of the Mission, 14, Finsbury-circus, E.C.

J. M., Middlesex Hospital.—Mr. Mitchell Henry, M.P. for Co. Galway, was formerly surgeon to your hospital. His residences are Stratheden House, Kensington, and Kylemore Castle, Galway.

S. C. A., Suffolk.—If the alleged outbreak arose from the occupation without previous disinfection of a house in which such disease had existed, the person responsible for the letting of the house in such condition would be liable to a penalty of £30. Moreover, if the sanitary anthorities had a medical certificate to the effect that disinfection was necessary, and it was not done satisfactorily, they might cause the work to be performed, and charge the owner or occupier with the cost.

Marcus.—The acceptance of the resignation of the commission of a surgeon in the Navy is in the discretion of the Admiralty. Officers are not allowed to throw up their commissions when and where they choose.

A Penalty of Sixpence for Disseminating Scarlet Fever.—A dairyman has been fined 6d. and costs, at the Leicester County Police-court, for allowing persons suffering from scarlet fever to be employed in his dairy, of whom the inspector found five so affected. There was a daily supply of sixty gallons of milk from the dairy to customers in Leicester.

Dr. C. L. N.—The official report of the "Congrès International d'Hygiène, de Sauvetage, et d'Economie Sociale," which met at Brussels in 1876, was published in 1877. It contains a number of papers and discussions of great interest.

English Provincial Coroner.—There are ninety-five coroners in Ireland, of which number only seventeen are members of the medical profession.

Dr. Williams.—Dr. John Brady, M.P. for Leitrim since 1852, is a member of the London College of Surgeons. He was born in 1812, and practised some time in the Blackfriars-road.

C. Gordon A.—Prosecutions are instituted by the vaccination officer, and not by the guardians, in the case of persons refusing to have their children vaccinated.

F.R.C.S.—The following gentlemen having been recommended, will no doubt be elected members of the Board of Examiners, viz.:—For Anatomy, Mr. Edward Bellamy, of the Charing-cross Hospital; and for Physiology, Mr. Jeremiah McCarthy, of the London Hospital. Both gentlemen are Fellows of the College by examination.

J. McB., Portsmouth.—Sir William Muir, M.D., K.C.B., receives a salary of £1500; the other gentlemen mentioned, at the Army Medical School, Netley—viz., Surgeon-General T. Longmore, V.B., Inspector-General W. Maclean, Surgeon-Major F. De Chaumont, and Dr. Aitken—receive each £850.

Dr. O'Donnell.—The annual income of the London College of Surgeons appears in the last Calendar as £15,133 7s. 9d., and of the Irish College of Surgeons £5993 9s. 6d. There are about 2000 Fellows of the London College, and under 400 of the Irish College.

Street Accidents and the Home Secretary.—The deputation to Mr. Cross, last week, from the Society for the Prevention of Street Accidents, did not receive much encouragement. He said street traffic was a most difficult thing to regulate, and as Paris and Berlin had favourably been referred to in respect to accidents in the streets, in comparison to London, he asked for reliable data that these things were managed so much better in those cities, with all their stringent regulations. *Primâ facie*, it does not appear to be difficult to require that no vehicle should be driven after dark without lights, nor that the drivers of covered carts and vans should be so seated as to have a clear and ready view of the traffic. Mr. Cross, however, admitted the importance of the suggestions the deputation had submitted to him, and said they should not be neglected.

Statist.—The Registrar-General's district, as shown by the last census, comprised an area of 75,362 acres—exclusive of about 2500 acres of the bed of the river Thames. In 1871 the population to a square mile was 26,674.

Two Students.—Yes; the Apothecaries' Company was formerly included in the Grocers' Company, and incorporated as a separate company by James I., December 6, 1615.

Percival M., Hants.—1. The Public Health (Water) Act, 41 and 42 Vict. cap. 25, passed in 1878, provides that it shall be the duty of every rural sanitary authority to see that every house has an available supply of good water within a reasonable distance. 2. The Sanitary Institute of Great Britain has established a system of examination of inspectors of nuisances and surveyors, to whom certificates of competency are granted if successful.

COMMUNICATIONS have been received from—

Mr. R. J. GODLEE, London; Dr. WOLFE, Glasgow; THE HONORARY SECRETARIES OF THE HARVEIAN SOCIETY OF LONDON; Mr. F. S. WARREN, London; Dr. MATTHEWS DUNCAN, London; Dr. BOWERBANK, London; Dr. WM. ROBERTS, Manchester; Dr. CAYLEY, London; Dr. G. E. HERMAN, London; THE HONORARY SECRETARY OF THE MEDICAL SOCIETY OF LONDON; Mr. J. CHATTO, London; Mr. T. M. STONE, London; THE SECRETARY OF THE OPHTHALMIC INSTITUTION, Glasgow; THE SECRETARY OF THE METROPOLITAN AND NATIONAL NURSING ASSOCIATION; Surgeon-General LONGMORE, Army Medical School, Netley; Dr. H. H. KANE, New York; Dr. FREDERICK TAYLOR, London; THE SECRETARY OF THE STATISTICAL SOCIETY, London; Mr. NOEL A. HUMPHREYS, London; Dr. J. W. MOORE, Dublin; Mr. C. HIGGENS, London; Dr. MEYMOTT TIDY, London; THE HONORARY SECRETARY OF THE ASSOCIATION OF SURGEONS PRACTISING DENTAL SURGERY, London; THE SECRETARY OF THE ROYAL HOSPITAL FOR DISEASES OF THE CHEST, London; Mr. AUSTINS, London; THE HONORARY SECRETARY OF THE ROYAL INSTITUTION, London.

BOOKS AND PAMPHLETS RECEIVED—

The Secret of a Good Memory, by Mr. F. Mortimer Granville—Fifteenth Annual Report of the Sanitary Commissioner with the Local Government of India, 1878—Mr. Thos. Fletcher, Warrington, Catalogue of Furnaces—Hints on Health, by Mr. Richard Paramore—Du Cancroide des Lèvres et de son Traitement—Weekly Return of Births and Deaths registered in the Punjab during the Week ending December 27, 1879—The Eighth Annual Report of the Committee of Visitors of the Hereford County and City Lunatic Asylum at Burghill, near Hereford, for 1879—The Hypodermic Injection of Morphia, by H. H. Kane, M.D.—Testimonials in favour of Dr. John Dougall—The Answer of the New York Neurological Society to the Committee of Public Health relative to Lunatic Asylums—Monthly Return of Births, Deaths, and Marriages registered in the Eight Principal Towns of Scotland, February, 1880—The Medical Act (1858) Amendment Bill and Medical Reform, by W. E. Steavenson, M.B., M.R.C.S.—Practical Chemistry, by W. A. Tilden, D.Sc. Lond., F.C.S.—The General Practitioner of Medicine, his Position and Education, by Robert L. Bowles, M.D., M.R.C.P.—Twenty-first Annual Report of the Royal Edinburgh Hospital for Sick Children, February, 1880—On the Quantity and Quality of the Water supplied to London during 1879, by Charles Meymott Tidy, M.B., M.R.C.S., F.C.S.—Boracic Acid a New Remedy in Eye Diseases, by Samuel Theobald, M.D.—Cours de Thérapeutique, par Adolphe Gubler—Le Cervean, par le Dr. C. Morel—Separat-Abdruck aus dem Archiv für Anatomie und Physiologie—The Sixty-sixth Annual Report of the Royal Hospital for Diseases of the Chest.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Centralblatt für die Medicinischen Wissenschaften—

Nature—Revue Médicale—El Siglo Medico—Practitioner—Standard, March 3—Revista de Medicina—Gazette Hebdomadaire—Therapeutic Gazette—Analyst—Washington National Board of Health Bulletin—Croydon Advertiser and Surrey County Reporter—Michigan Medical News—Norfolk Mail, March 2—Louisville Medical News—Boston Medical and Surgical Journal—Verhandlungen der Physiologischen Gesellschaft.

APPOINTMENTS FOR THE WEEK.

March 13. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

Royal Institution, 3 p.m. Mr. G. Saintsbury, "Dryden and his Period."

15. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Royal College of Surgeons of England, 4 p.m. Prof. W. H. Flower, "On the Comparative Anatomy of Man."

Medical Society of London, 8½ p.m. The President (Mr. Gant) will deliver an Opening Address. Dr. Ord, "On a Case of Thoracic Aneurism Treated by Electrolysis; and Observations on Thoracic Aneurism."

16. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Royal Institution, 3 p.m. Prof. Schäfer, "Physiology of Muscle."

Statistical Society, 7¾ p.m. Surgeon-General T. Graham Balfour, M.D., "Vital Statistics of Cavalry Horses." Prof. Leone Levi, "A Survey of Crime and Offences in England and Wales from 1857 to 1878."

Pathological Society, 8½ p.m. Dr. Saundby (of Birmingham)—Specimens illustrating the Histology of Granular Kidney. Dr. Greenfield—Specimens of Granular Kidney. Mr. Nunn—1. Section of Secondary Tumour after the Removal of the Breast; 2. Epithelioma of the Penis; 3. Melanosis of the Finger. Dr. Norman Moore—1. Aneurism of Mitral Valve; 2. Aortic Aneurism opening into Right Auricle; 3. Ulcer of Stomach. Mr. Startin—Sections of Molluscum Contagiosum. Dr. Thin—Microscopic Sections of Elephantiasis, and Photographs of the same Disease from Shanghai. Mr. Walsham—Horny Growth from Lower Eyelid. Mr. Godlee—Melanosis of Finger. Mr. Morrant Baker—Skin Disease, probably Lichen Ruber (living specimen). Mr. Hulke—Drawings of Cancer. The President—Multiple Ivory Patch Morphœa in process of Rapid Recovery (living specimen).

17. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Lister), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.; National Orthopædic, Great Portland-street, 10 a.m.

Royal College of Surgeons of England, 4 p.m. Prof. W. H. Flower, "On the Comparative Anatomy of Man."

Royal College of Physicians, 5 p.m. Second Lumleian Lecture—Dr. W. Roberts, "Researches on the Digestive Ferments, and the Preparation and Use of Artificially Digested Food."

Guild of St. Luke (59, Mortimer-street, Cavendish-square), 7½ p.m. Dr. Arthur Ernest Sansom, "Our Principles of Treatment of the Sick Poor. Are they Justifiable?"

Association of Surgeons Practising Dental Surgery (Council Meeting, 7½ p.m.), 8½ p.m. Mr. Francis Fox, "On Irregularities of the Teeth and their Surgical Treatment."

18. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

Royal Institution, 3 p.m. Prof. Dewar, "Recent Chemical Progress."

Harveian Society, 8½ p.m. Mr. A. J. Pepper, "On a Case (and Prepared Specimen) of Malignant Disease of the Hip." Mr. Knowsley Thornton, "On the Various Methods of Dealing with the Pedicle in Ovariotomy."

19. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

Royal College of Surgeons of England, 4 p.m. Prof. W. H. Flower, "On the Comparative Anatomy of Man."

Royal College of Physicians, 5 p.m. Third Lumleian Lecture—Dr. W. Roberts, "Researches on the Digestive Ferments, and the Preparation and Use of Artificially Digested Food."

Clinical Society, 8½ p.m. Papers postponed from the last meeting (Friday, March 12). Mr. Thomas Smith, (1) "On Spontaneous Gangrene of the Thumb and Fingers of the Right Hand"; (2) "On Two Cases of Cystic Hygroma." Dr. de Havilland Hall, "On a Case of Intrathoracic Sarcoma." Mr. Nettleship, "On Two Cases of Sympathetic Ophthalmitis setting in Three Weeks after Excision of the other Eye." Dr. F. Taylor will show a Case of Unusual Transmission of Cardiac Bruit by the Lung.

Royal Institution (Council Meeting, 8 p.m.), 9 p.m. Prof. Tyndall, "Goethe's Farbenlehre (Theory of Colours)."

VITAL STATISTICS OF LONDON.

Week ending Saturday, March 6, 1880.

BIRTHS.

Births of Boys, 1446; Girls, 1331; Total, 2777.
Corrected average in the 10 years 1870-79, 2587·1.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	810	797	1607
Average of the ten years 1870-79, corrected to increased population	892·7	864·6	1757·3
Deaths of people aged 80 and upwards ...	...	...	72

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa
West	561359	...	5	6	3	14	...	1	...	3
North ...	751729	...	2	8	...	47	...	2	1	2
Central ...	334369	1	3	6	1	13	...	...	...	...
East	639111	3	1	7	1	22	1	2	1	6
South	967692	4	6	17	...	59	...	5	1	3
Total	3254260	8	17	44	5	155	1	10	3	14

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·536 in.
Mean temperature	48·5°
Highest point of thermometer	60·5°
Lowest point of thermometer	36·8°
Mean dew-point temperature	42·4°
General direction of wind	S.W.
Whole amount of rain in the week	0·41 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, March 6, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1880.*	Persons to an Acre. (1880.)	Births Registered during the week ending Mar. 6.	Deaths Registered during the week ending Mar. 6.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3664149	48·6	2777	1607	60·5	36·8	48·5	9·17	0·41	1·04
Brighton	107321	45·6	91	41	54·7	37·5	45·8	7·67	0·35	0·89
Portsmouth ...	134224	29·9	82	50	...	...	...	...	...	...
Norwich	85827	11·5	61	34	59·5	37·0	47·3	8·50	0·33	0·84
Plymouth	74993	53·8	40	41	57·0	38·5	48·8	9·34	0·57	1·45
Bristol	213536	48·0	131	77	52·6	36·5	46·5	8·06	1·62	4·11
Wolverhampton ...	75970	22·4	60	29	57·2	32·8	45·5	7·50	0·44	1·12
Birmingham ...	394738	47·0	258	144	...	...	...	...	...	...
Leicester	129912	40·6	111	54	57·8	33·2	47·2	8·44	0·60	1·52
Nottingham ...	173827	17·4	114	85	57·3	32·2	46·5	8·06	0·87	2·21
Liverpool	544056	104·4	401	256	56·0	33·4	46·1	7·84	1·31	3·33
Manchester ...	363130	84·6	246	157	...	...	...	...	...	...
Salford	185786	35·9	132	78	...	...	...	...	...	...
Oldham	115413	24·7	68	49	...	...	...	...	...	...
Bradford	197196	27·3	120	66	54·2	33·0	44·2	6·78	1·87	4·75
Leeds	318929	14·8	211	126	56·0	34·0	45·4	7·44	1·40	3·56
Sheffield	304938	15·5	207	122	56·0	32·5	46·4	8·00	1·68	4·27
Hull	149627	41·2	100	58	56·0	34·0	44·9	7·17	1·64	4·17
Sunderland ...	116730	42·2	92	44	57·0	36·0	46·4	8·00	0·43	1·09
Newcastle-on-Tyne	149366	27·8	106	63	...	...	...	...	...	...
Edinburgh	229839	54·8	128	101	54·6	33·2	42·8	6·00	1·03	2·62
Glasgow	589598	97·7	382	263	52·5	35·5	43·9	6·61	1·46	3·71
Dublin	314666	31·3	215	217	56·8	32·0	46·8	8·23	1·67	4·24
Total of 23 Towns in United Kingdom	8633571	39·2	6113	3762	60·5	32·0	46·1	7·84	1·04	2·64

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·54 in. The lowest reading was 29·17 in. on Wednesday morning, and the highest 30·02 in. on Saturday morning.

* The figures for the English and Scottish towns (except for Nottingham, Salford, and Oldham) are the numbers enumerated in April, 1871, raised to the middle of 1880 by the addition of nine years and a quarter's increase, calculated at the rate which prevailed between 1861 and 1871. Revised estimates have been adopted for Nottingham, Salford, and Oldham, based upon special returns of inhabited houses existing within those boroughs. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

CROONIAN LECTURES.

ON SOME POINTS IN THE PATHOLOGY AND TREATMENT OF TYPHOID FEVER.

Delivered at the Royal College of Physicians of London.

By WM. CAYLEY, M.D., F.R.C.P.,

Physician to the Middlesex Hospital and to the London Fever Hospital; Lecturer on Medicine to the Middlesex Hospital Medical College.

Lecture I.

(*Concluded from page* 285.)

Admitting, then, that in all probability typhoid fever never arises *de novo* from decomposing sewage, and that whenever it spreads from the sick to the healthy it is by a process of indirect infection, it still remains to be considered whether this is the only way in which the disease may originate or become disseminated. To this question I think we are compelled to give a negative answer. Several outbreaks have now been recorded which have been ascribed to eating diseased meat. And although in some of these considerable doubt has been expressed as to the real nature of the disease, in others I think the evidence is quite decisive.

The first of these outbreaks on record is the well-known one which occurred at Andelfingen, in the canton of Zurich, in 1839.

On July 10 of this year the Local Choral Society held a festival meeting, after which 513 persons of all ages sat down to a cold collation, consisting chiefly of veal and ham. It was noticed at the time that neither the veal nor the ham were perfectly good. Some portions of the former had a greenish colour and a disagreeable smell; the ham also is said not to have tasted well. But most of the guests observed nothing amiss, and ate heartily. Of the 513 persons who partook of this collation, 421 were subsequently attacked by an acute febrile disease, which was regarded at the time as typhoid. Thirty-four inhabitants of Andelfingen were also attacked who had taken no part in the choral festival, but all of whom, it was ascertained, had been supplied by the same butcher who had furnished the veal and ham for the festival.

The day after the festival there was a wedding in the neighbourhood of Andelfingen, at which 15 persons were present, only one of whom had attended the choral meeting. The meat—veal and beef—for the wedding breakfast was supplied by the same butcher. Of these 15 persons 11 were attacked.

The period of incubation of this epidemic was very variable. A few were seized with nausea and vomiting on their way home, but this was ascribed to their having drunk too much wine. Out of 230 cases in which the incubation period was ascertained, 43 were taken ill during the first five days, 123 during the second five days, 48 during the third five days, and 16 during the fourth five days, 6 being attacked on the nineteenth day.

The symptoms were those of severe gastro-intestinal irritation, with high fever, delirium, stupor, congestion of the lungs, and great prostration. No rose rash was observed, but in some cases there were petechiæ. The duration of the milder cases was about eight days; of the severer ones, three to four weeks. Convalescence was slow, and often the hair fell out. The mortality was slight, and on post-mortem examination in some cases there were infiltration and ulcerations in the lower part of the ileum, with enlargement of the spleen; in others these changes were not observed.

There can be no doubt as to the meat having been the cause of the epidemic, as only those persons who had partaken of it were attacked, while a very large number of persons from all parts of the canton were present as singers or spectators who did not share in the collation, and they all escaped. But great doubts have been expressed as to whether it was really typhoid fever, or a form of poisoning resembling sausage poisoning.

In 1845 a similar epidemic occurred at Thalweil, though on a much smaller scale. The particulars of this I have failed to obtain, as the journals containing it are out of print. But 8 out of 10 persons were attacked with what was believed to be typhoid fever after eating bad veal.

A third epidemic due to the same cause, and which was undoubtedly typhoid fever, occurred at Kloten, a place about seven miles north of Zurich, in 1878.

On Ascension-day, June 30, a festival was held of the united choral societies of the district, together with choirs from Zurich and Winterthur. The festival collation was furnished by the landlord of one of the inns, who himself was attacked by the epidemic. The food supplied consisted of ragout of veal, roast veal, and veal sausages.

The meat, which came from various sources, was hung up in the meat room of the inn, and, the day before the festival, was partly roasted, partly minced up for sausages, and the fragments used for the ragout were cooked on the following day.

Nothing amiss was observed with the ragout, but the cold roast veal was in part decomposed, and the sausages were manifestly bad. In consequence of this they were largely distributed among the spectators, the children, and persons who could not afford to pay. Out of 690 persons who sat down to the collation, 290 were attacked. In all, 668 persons were infected who had partaken of the meat provided for the festival, either at the collation or at the inn, or who had been supplied with it at home; besides which 49 secondary cases occurred—*i.e.*, persons who subsequently became affected by contagion without having eaten of the meat. All other sources of infection could be almost certainly excluded, and Kloten was quite free from typhoid at the time. A very large number of the visitors to the festival ate no meat, but only drank wine: none of these were attacked. And it was clearly shown that the water was not the cause of the outbreak. Many persons who had drunk no water were attacked, and others who had drunk freely escaped. Several persons who drank wine to excess, and consequently vomited in the evening, afterwards escaped.

The incubation period, as in the Andelfingen epidemic, was for the most part very short. Some persons were taken ill on the second day, with loss of appetite, nausea, headache, pain and swelling of the belly, and slight fever. These early cases were the mildest, and many patients recovered in a few days. The greater number fell ill between the fifth and the ninth days. The symptoms were chills, fever, diarrhœa, great prostration, in many cases early and violent delirium. Epistaxis frequently occurred, and also profuse intestinal hæmorrhage. The roseolous rash of typhoid was present in almost all the cases, and in many was remarkable for its extensive development, sometimes leading to little infiltrations forming distinct elevations, and leaving behind slight pigmentations.

Post-mortem examination showed the characteristic appearances of typhoid fever, infiltration, and sloughing of Peyer's patches and the solitary glands, with characteristic ulcers where the sloughs were detached; not unfrequently also infiltration and sloughing of the solitary glands of the large intestine, great enlargement of the mesenteric glands and spleen.

With regard to the meat supplied, the following facts were ascertained:—Forty-two pounds of veal were furnished by a butcher at Seebach, taken from a calf which appears to have been at the point of death from some disease, when it received the *coup-de-grâce* from the hands of the butcher. All the flesh of this animal was sent to supply the festival at Kloten, but the liver was eaten by an inhabitant of Seebach, and he was attacked by typhoid fever; and the brain was sent to the parsonage at Seebach, and all the household became affected by the same disease.

It was also ascertained that another of the calves which supplied the veal was suffering from umbilical phlebitis and peritonitis, and was at the point of death when it was slaughtered. The veal from this calf had been kept fourteen days, and was in a decomposed condition. All the meat was placed together in the meat receptacle of the inn, which was in a horribly filthy state, and no doubt the putrefying flesh of this last calf, together with the state of the receptacle, would rapidly excite decomposition in the whole supply.

According to Professor Huguenin, the meat had two injurious qualities—(1) it was putrid; (2) it was infected with the specific typhoid poison. And the resulting epidemic showed two corresponding groups of symptoms—(1) a putrid intoxication, which caused an acute catarrh of the

gastro-intestinal mucous membrane, coming on early; and (2) typhoid fever, which sometimes followed on the former, and sometimes occurred independently. The mortality was extremely small, this being probably due to the fact that many of the affected persons only suffered from the former symptoms. The peculiarities of the Andelfingen epidemic are no doubt to be explained in the same manner.

The question now arises, How did the meat acquire the specific typhoid infection? There can be little doubt but that this was derived from the calf supplied by the butcher at Seebach, the liver and brain of which gave typhoid fever to persons residing there who had not visited Kloten. This calf was very ill; and Professor Huguenin thinks there can be no doubt but that the animal was itself suffering from typhoid fever. He has convinced himself that typhoid fever is not uncommon among cattle in Switzerland; and that the flesh of such animals is often eaten without any injurious results, some putrefactive changes being necessary to develope the infectious properties. A remarkable fact bearing on this question was observed in this epidemic. In the house of one of the persons attacked, while he was still laid up, two calves were taken ill and slaughtered, and a post-mortem examination showed the characteristic intestinal lesion of typhoid fever, the presumption being that these animals became infected by the alvine discharges of their master before he took to his bed.

Shortly after this outbreak another small one took place at Kronau. A butcher there refused to buy a calf because it was ill; the family therefore to whom it belonged ate it themselves, and six members were attacked by typhoid fever.

A similar outbreak affecting fifteen persons occurred near Winterthur in 1869, the particulars of which I have been unable to obtain; and one has been recorded from Iceland.

I think, therefore, the evidence that typhoid fever may be caused or disseminated by diseased meat is sufficiently conclusive. But whether this is due to the animals being themselves affected with the disease, requires further investigation. The experiment of feeding pigs with typhoid stools in this country has always failed to produce the disease: whether the attempt has been made with calves I do not know.

Seeing, then, that the flesh of calves suffering from typhoid fever, when in a state of decomposition, appears to be capable of communicating the disease, it is an interesting inquiry as to whether the milk of cows similarly affected would also possess contagious properties. I believe that in this country, wherever epidemics have been caused by contaminated milk, the poison has been traced to the water which has been mixed with the milk; but, judging by analogy, there is great probability that the milk itself might be capable of communicating the disease. It has been demonstrated by repeated experiments that not only will the flesh of tuberculous animals, when eaten by other animals, cause tubercular ulceration of the intestines followed by general tuberculosis, but that also the milk of tuberculous cows possesses the same properties; in both cases the infection is prevented by thorough cooking or boiling. It is an uncomfortable reflection that cooking seems not to have destroyed the poison contained in this infected meat.

Doubtless these questions, which are of the utmost importance to the public health, will soon be determined by the researches of foreign experimenters; for in this country, I presume we must, in investigations of this kind, be satisfied now to play the part of hearers rather than of doers.

The usual modes in which typhoid fever becomes disseminated have been so thoroughly investigated, and are so universally recognised, that I do not propose again to repeat them. Widespread epidemics have always been traced to contamination of the water-supply, the water itself being the medium of the infection, or else the milk with which the contaminated water has been mixed. Local outbreaks confined to particular houses are sometimes due to the same cause, sometimes to inhaling emanations from cesspools, drains, and sewers, in consequence of some defective sanitary arrangements; and it must be confessed that great ingenuity has been shown by architects, builders, and plumbers to insure that the air we breathe or the water we drink shall be so contaminated. Sometimes this is due to dishonesty, sometimes to carelessness, more often to ignorance. Several striking instances of each of these have come under my notice. Thus, in a new country house, where the drains had been properly planned and arranged, and it was supposed every precaution had been taken, the basement nevertheless became sodden with sewage. On taking up the drains it was found that the pipes had merely been laid end-to-end, and not cemented together. This was an example of dishonesty. In another case the drain-pipes had been made to slope the wrong way, insuring the perpetual accumulation of stagnating sewage. This was carelessness. A third case was that of a large public institution in which several cases of typhoid had originated, and I was asked to examine the water-supply and closets. The main cistern supplying the building was placed on the roof, and was of course covered by a lid. On lifting this I found a distinct smell of sewer-gas, and I noticed a large pipe which opened a few inches above the surface of the water. On investigation this was found to be a ventilating shaft constructed for the purpose of ventilating the main sewer of the building—no doubt put up with the best intentions many years ago, when the necessity of ventilating drains first began to be insisted upon.

We may hope that such glaring examples are fast becoming things of the past, though I fear many of our architects are far behind the standard laid down 1800 years ago by Vitruvius, who demands of an architect not only that he shall be acquainted with the technicalities of his art, but shall have studied philosophy and acquired a knowledge of medicine.

"Philosophos diligenter audiverit, medicinæ non sit ignarus."

Probably one of the commonest causes of sporadic outbreaks of typhoid fever in large towns are water-closets, and the introduction into houses of this most necessary adjunct of civilisation has always been followed by an increase in its development. This has been notoriously the case in Edinburgh, where water-closets are of comparatively recent introduction; and I think we are justified in regarding Sir John Harrington, who, in the reign of Queen Elizabeth, invented water-closets, as being largely responsible for the spread of typhoid fever. The dangers of water-closets are twofold: 1. When the handle is pulled up, the contents of the pan necessarily displace the air in the soil-pipe and drain, and unless (which is the exception) a proper ventilating apparatus has been adapted, some of this rushes up into the closet, carrying of course with it the typhoid poison, if this should happen to be present, and so very likely infecting the occupant. 2. The risk of contaminating the drinking-water. Even at the present time the great majority of water-closets are so constructed that the waste-pipe of the supplying cistern, from which the drinking-water is often taken, goes down directly into the soil-pipe, and so—as in the institution I have just described—though not intentionally, forms a ventilating shaft to the drain. I have no doubt but that this arrangement holds in two-thirds of the London houses, and consequently the drinking-water is habitually contaminated with sewer-gases. Fortunately the system of drainage is now so admirably constructed that stagnation of sewage, which seems to be the most important factor in the development of the typhoid poison, does not often occur.

It is manifest that a system of periodical inspection of the water-cisterns and water-closets is urgently required. The present water companies have the right, which they occasionally exercise, of inspecting the cisterns, but only for the purpose of seeing that the water is not allowed to run to waste. But if the water-supply were in the hands of a public body, nothing would be easier than to enlarge a little the scope of this inspection and to make it more regular; and I believe if this were done it would almost put a stop to the local and sporadic cases which occur in London,—I except, of course, the annual outbreak among the upper and middle classes, who bring the disease back with them from the various health-resorts in this country and abroad, where they have spent their autumn holidays.

Another point of great practical importance in the etiology of the disease is the extraordinary dilution under which the poison may retain its potency. One remarkable instance of this I have described in the epidemic at Lausen. A still more remarkable example is furnished by the recent epidemic at Caterham and Redhill. This outbreak was clearly shown by Dr. Buchanan to have been caused by the contamination of the water of the Caterham Water Company by the alvine discharges of a single workman suffering from ambulant typhoid, who was engaged in the construction of a new adit. If any necessity arose for the workmen to relieve themselves during their spell of work below, which lasted from eight to twelve hours,

and there should be any difficulty or delay in their being drawn up to the surface, it was arranged that they should use the buckets which were employed in raising the chalk.

This man, it appears, had very copious diarrhœa, and had to relieve his bowels two or three times during each spell, but he positively denied ever having passed his motions in the adit without waiting for a bucket. But, nevertheless, there were undoubted means by which his evacuations could have found their way into the water; for, as the buckets were drawn up, their oscillations caused them to strike against the sides of the shaft, and some of the contents would so be shaken out and fall over a stage into the water below. And he also stated that his motions were so liquid that the buckets, which were also used to lower materials used in the construction of the adit, must have been stained with them. Here, then, we have in all probability only some water—a proportion of the most extreme minuteness—and yet the water so contaminated gave typhoid fever to 305 persons. splashings of typhoid stools mixed with a very large body of

I think these two instances are sufficient of themselves to serve as a warning against trusting to irrigation and downward filtration as a means of purifying water, and also against the dictum that water containing less than a certain proportion of organic impurity is practically wholesome and fit for drinking, irrespective of its original source. It ought, I think, to be laid down as a rule of hygiene, that human excrements should under no circumstances be mixed with drinking-water, however completely they may be subsequently removed by filtration or rendered innocuous by oxidation. Of course, in the case of a city like London, this can only be looked upon as an ideal to be realised in some distant future; but with less than this we ought not to rest satisfied.

It is now an interesting question, What are the causes to which our immunity in London from the spread of typhoid fever by water is due? The Thames, from which we derive our drinking-water, is unquestionably contaminated not only with excrement, but also with the specific poison of typhoid fever. Until quite recently many large towns, where typhoid fever is more or less endemic, discharged their sewage into it, and many places do so to this day, and yet I believe that since the intake of the water companies has been removed above Teddington Lock, the water, as delivered from their mains, has never caused an outbreak. Where in London typhoid fever has been traced to the water, it has been due to its subsequent contamination in the cisterns of the consumers.

With the evidence afforded by Lausen and Caterham before us, we can hardly ascribe this immunity to the mere dilution of the poison; neither can it be attributed to filtration, for we have seen that the very complete natural filtration of the Lausen water was inoperative, and it is notorious that the filtration of the London water companies is very defective. It is not sufficient even to remove the coarser particles in suspension; thus in times of flood the water is often more or less turbid, and moreover frequently contains living organisms. It is, therefore, quite impossible that the extremely subtle poison of typhoid would be separated. What degree of natural or artificial filtration is required to effect this is not known. It is probable that filters which act chemically on the water may do so. Dr. Gustav Bischoff, in a paper communicated last year to the Royal Society, showed that the germs of putrefaction were completely separated or rendered inert by filtration through spongy iron; and the same thing has been claimed for charcoal; but hitherto these modes of filtration have only been applied on a small scale, and it must be remembered that unless a filter is kept clean and in good order, it only increases the risk of contamination.

I think, then, that we must assume that when the typhoid poison enters a large running body of water, where it is freely exposed to the air and various oxidising agencies, it is soon rendered inert; while in close, confined situations it retains its activity for an indefinite time. This is, perhaps, a reason for regarding a large open body of water as a safer source of supply in a thickly populated country than wells and springs, in consequence of the ever increasing difficulty of preventing their accidental contamination.

A point of great interest in the pathology of typhoid fever, and one which may perhaps be most conveniently considered in connexion with the etiology, is the period of latency or incubation, the determination of which presents great difficulties.

If we are to accept as trustworthy the statements which have been made by the authorities who have written on this subject, we should have to confess that typhoid fever may have an incubation varying from a few hours to six weeks; and though the evidence adduced in favour of these extremes is practically valueless, nevertheless it can hardly be doubted but that great variations do occur.

We may, I think, accept as well established that the usual period, especially when the disease is communicated by drinking-water, is about fourteen days. But considerable deviations, both real and apparent, are often met with. Often much difficulty is experienced in fixing the exact date of onset of the disease, and to this many of the apparent deviations from the usual period are due. Not only in many cases is the onset gradual, but frequently there are distinct premonitory symptoms, a *stadium prodromorum*, during which the patients complain of weariness, some pain and weight in the limbs, impairment of appetite, often diarrhœa. These symptoms may pass gradually into those of the developed disease (and unless thermometrical observations have been made—which is rarely the case at this stage—it becomes impossible to fix the date of the true commencement of the attack, which should be reckoned from the time at which the temperature rises). In other cases the period of invasion is distinctly indicated by the occurrence of rigors, which may or may not have been preceded by these premonitory symptoms. I have recently seen a very severe case of typhoid, in which the premonitory symptoms lasted for a fortnight before the occurrence of rigors and the definite onset. In this case a very slight increase in the severity of these premonitory symptoms might easily have caused the incubation period to have been reckoned as one day instead of fourteen. In children, whose nervous systems react strongly to slight causes of disturbance, I have no doubt but that the premonitory stage is often included in the fever; and many of the best authenticated cases of unusually short incubation periods have occurred among children.

Another difficulty is that of excluding in a disease like typhoid, of which the contagion is indirect, other sources of infection than that which is supposed to have caused the attack.

The following may be cited as instances of unusually short incubation:—

In the milk epidemic in Marylebone a child was taken ill five days after drinking the contaminated milk, but it is possible that here the premonitory stage was included in the fever.

Griesinger relates three cases in which the period was less than twenty-four hours. He states that one day, while sitting by the bedside of a case of typhoid, he suddenly felt unwell and thought he had caught the fever, and the next day he was taken ill.

I only mention this case, as it is not unfrequently quoted as an evidence of the occasional occurrence of very short periods. His other two cases are almost equally valueless.

Dr. Clifford Allbutt published a case in which the period of incubation was exactly four days, but further investigation showed that the disease was acquired, in all probability, in quite a different manner from that at first supposed, and that consequently no conclusion could be drawn from it as to the incubation period.

One of the most striking instances of a supposed very short incubation period is the well-known outbreak at a school at Clapham in 1829. Here, within four days of exposure to the emanations from the contents of a choked drain, twenty boys out of twenty-two were attacked by vomiting, purging, fever, and extreme prostration, and two died comatose within twenty-five hours. In these two cases the solitary glands and Peyer's patches were found swollen and infiltrated. Here, however, the nature of the disease is open to doubt. Some very high authorities, as Sir Thomas Watson, do not regard it as having been typhoid; and certainly the phenomena were very unlike those of ordinary typhoid. The contagion must have been of extreme virulence, as two cases died comatose in twenty-four hours, and yet the other twenty recovered, giving a general mortality below the average. There can be no doubt but that decomposing sewage may contain other poisons besides that of typhoid fever, and considerable swelling of the glandular apparatus of the intestine may be caused by many kinds of irritation.

Professor Quincke, of Bern, cites the following example of unusually short periods. Three boys played on successive days, from March 13 to 16, with some straw from a mattress soiled with the discharges of a fatal case of typhoid. All three were infected; the first was taken ill on March 22. Here the maximum limit was nine, the minimum three days. Another case was that of a woman who came from a distance to an infected house, where she stayed two or three days. She felt ill on her way home, and after a few days took to her bed, and died on the fourteenth day. Here the maximum limit was six days.

More common than very short are protracted periods, and an incubation of twenty-one days is by no means infrequent, especially when the cause has been contaminated water or milk. But periods of five or six weeks may, I think, in all cases be ascribed to errors of observation.

The causes of this variability of the incubation period of the contagious fevers are very obscure, and cannot be satisfactorily accounted for on any of the theories which have been put forward as to the nature of these diseases. In some the period is much more variable than in others. Thus in morbilli, rubeola, variola, varicella, and for the most part typhus, it is pretty constant, and is much the same in all; scarlatina with a short, and typhoid with a long period, are much more variable, and in some fevers in which poison is fixed, and can only be communicated by inoculation, as syphilis and hydrophobia, the period may be protracted to an extraordinary degree.

Among the causes which may influence the incubation period is, first, the mode in which infection takes place. It seems probable that when the poison directly enters blood, as by inoculation, it is likely to take effect more rapidly than when it is absorbed through the mucous surfaces. Thus there is reason to believe that when the poison of scarlatina is introduced through a wound or raw surface, as after a surgical operation or delivery, the incubation may be very much curtailed.

So too we might expect that when the lymphatics are the medium of absorption, and the poison is first conveyed to the glands, the incubation period would be longer than when it is absorbed by the bloodvessels. Thus in syphilis, which has a very long incubation, the poison is absorbed by the lymphatics.

According to the views of Liebermeister, the poison of typhoid is always swallowed and absorbed by the intestinal glands, where it exercises its primary influence. There can, however, I think, be little doubt but that it may also be absorbed by the respiratory and other mucous membranes, and so obtain a more direct entrance into the blood. Indeed, if, as is maintained by Friedreich, the spleen begins to enlarge during the incubation period, it is manifest that the poison does not lie dormant during this period in the intestinal and mesenteric glands, but has already passed into the blood. Now, it appears, on the whole, that the incubation period is more frequently unusually short where the disease has been acquired by exposure to emanations from decomposing sewage than where drinking-water has been the medium of contagion, whereas the unusually long periods have occurred in the latter condition. But to this there are exceptions, as in the milk case I quoted above; and further evidence is required before any positive conclusions can be drawn.

Another cause which may influence the incubation period is temperature. It is well known that vaccinia will often run a somewhat shorter course in hot weather; and by increasing the temperature of the skin, as by a blister, the eruption of small-pox may be hastened: it is therefore probable, if anything occur to cause febrile disturbance, and so raise the temperature during the period of incubation, that this will be shortened.

Lastly, certain constitutional conditions will influence the incubation period. Thus Obermeier has shown that the occurrence of menstruation shortens the latent period of small-pox.

That the variability of the incubation period is due in many cases to some peculiarity on the part of the patient, and not to any difference in the state of the poison or in the manner in which it is introduced, is manifest from the fact that it usually happens, when several persons are exposed at the same time and in the same manner, that they fall ill at very variable intervals. A very remarkable instance of this kind is narrated by Professor Quincke.

On June 22, 1873, the Federal Gymnastic Festival was held at Münsingen, a village situated about seven miles from Bern, and there was a large gathering of visitors from all parts of Switzerland, most of whom left Münsingen the same day. It so happened that the wife and son of the landlord of one of the inns which was close to the ground where the gymnastic meeting was held were ill with typhoid fever, and only ten feet from the leaky soil-pit of the privy of the inn was a well from which water was supplied to the persons taking part in the festival, as well as to those who took refreshments at the inn itself. An epidemic of typhoid fever broke out among persons who had attended this festival, and the particulars of fourteen cases occurring among visitors who came from places free from typhoid have been ascertained. In one case the attack commenced eight days after the festival, in three cases on the twelfth day, in one case on the thirteenth day, in two cases on the fourteenth day, in two cases on the fifteenth day, in two cases on the sixteenth day, in two cases between the sixteenth and eighteenth days, and in one case some time between the fourteenth and twenty-second days, when he first came under medical observation. Here, then, we see incubation periods varying from eight to eighteen days where there is strong reason for believing that the conditions of infection were the same.

These cases are also interesting as many of them were attended by well-marked premonitory symptoms, the causes of which in all the contagious fevers are very obscure. One of these patients was attacked two days afterwards by headache, vomiting, and diarrhœa, from which he recovered, though he did not again feel quite well, and then on the sixteenth day he was again attacked by rigors and headache, and the disease now became developed. In a second case violent diarrhœa and vomiting came on a few days after, and again quite subsided before the commencement of the fever. Similar cases are not uncommon. I have recently had under my care a case in which the patient was attacked by diarrhœa, which only lasted a few days, though he continued to feel somewhat unwell; but it was not till after the lapse of a fortnight that he shivered and was definitely taken ill with typhoid. These cases would seem to indicate that the poison exercises a primary irritating action on the intestinal mucous membrane before its absorption; or possibly, where contaminated water is the medium of infection, other irritating substances may be present which cause the primary diarrhœa. Most probably, however, the primary diarrhœa is due to the typhoid poison.

On the whole, we must, I think, come to the conclusion that the variability of the latent period of typhoid, though it may be influenced by the manner in which the infection takes place, depends in most cases upon some unknown peculiarities of the patient himself. It is not probable that the amount or intensity of the poison can have any influence, as we see both in this and in other fevers that the period of incubation of the mild and severe cases is the same.

Tympanites at the Menopause.—Prof. Gaillard Thomas observes, in one of his clinical lectures, that one characteristic of the "change of life," especially when it comes on at a later period than usual, is senile hysteria; and accompanying this is a very marked tendency to tympanites. It is often seen also when there is none of the hysterical element present. No remedy at present known to science will cure this tympanites. A frank and kindly talk will do more for the patient than all the medicines in the world. Such women are apt to imagine that they are the subjects of tumours and all sorts of terrible affections, and it will do them a great deal of good if they be made to understand that the whole trouble is due merely to wind in the intestinal tract, and that the utmost injury it can cause them is simply a little inconvenience. The tympanitic condition is due entirely to the state of the nervous system peculiar to this period of life, and nothing need be done for it except to keep the bowels regular. In some instances systematic kneading of the abdomen is of service, and the knee-chest position will often enable the patient to get rid of a considerable quantity of gas. I have been in the habit of employing this method in certain instances for the last fifteen or twenty years, and can therefore confidently recommend it to you.—*New York Med. Record*, December 6.

ORIGINAL COMMUNICATIONS.

LEAD AND OTHER SOLID COMPRESSION IN WOUNDS AND ULCERS.

By BRINSLEY NICHOLSON, M.D.

In my first campaign in South Africa, my medical bat-horse showed a propensity, whenever descending a slope, however slight, to stand and kick furiously with both legs. Rearrangement or re-adjustment of his pack-saddle, panniers, or girths was unavailing. By-and-by he Darwinially developed still further, and halted and kicked when going down a slope, up a slope, or on level ground. Attached *pro tem.* to some Dutch burghers, their good nature, on entreaty, consented not to let him loose, but to try and lead him still. The results were—the detachment instrument-case burst open, the knives, etc., scattered and blunted; the pills, powders, and unguents pounded into undistinguishable masses, whose complete admixture would have gladdened the heart of a painstaking druggist. Luckily, some little of the more important medicines escaped; and so, the disaster being remediless, I bore it philosophically, there being no use in crying over spilt milk. My equanimity as to the loss of unguents and dressings was the greater, that my memory immediately recurred to the notice in a late *Medico-Chirurgical Review* of the book of a French surgeon who in similar straits had taken to leaden plates. His practice, too, fell in with the theories I had been led to form when following Professor Syme's practice and cliniques.

Perhaps the treatment of indolent ulcers will best give an example of the plan and principles I went on. These ulcers having a cartilaginoid ring around them, all attempt at reparation is precluded, and there is consequently no attempt. Exterior to the ring, the skin, etc., is generally more or less eaten away, giving the ulcer a larger circumference. More accurate observation shows that the sore is still further enlarged and contraction further prevented by an interstitial infiltration throughout the surrounding parts. This is readily seen by measurements of the affected limb and of the sound one, if not by the eye.

The spherical bullet then in use was carefully hammered out till it became a thin, readily-flexible plate—say of about the length of two old penny-pieces, but wider than one; the rule given being that it was to be beaten till the outer margin began sensibly to split. The plate was then cut with scissors till it just overlapped the inner edge of the cartilaginoid ring. Others were placed on this, each a little larger, graduated-compress fashion, until they reached to or slightly over the height of the surrounding skin, one larger and thicker being usually applied over all, so as to compress the parts immediately surrounding the sore. Generally also a couple of strips of soap plaster—the ordinary diachylon being often too irritant in warm climates—were also applied to keep the lead compress steady and in place.

The limb was equably and pretty firmly bandaged from the extremity upwards, a little tow, wadding, or lint being placed wherever necessary over and around the lead,—and then the bandage wound over all, even a little more firmly, and continued to a convenient distance above. The patient was allowed to walk about, but cautioned to do nothing hurriedly or violently, and to re-apply to me at once should the bandages slip or become loose. On the third morning—that is, forty-eight hours afterwards—all was removed, the ulcer gently laved, the plates washed, and cut wherever this was rendered necessary by the decreased size of the ulcer, and they and the bandages speedily re-applied. If the surface of the sore at any time seemed to require it, nitrate of silver, bluestone, or their solutions, etc., were applied to the sore or to the cartilaginoid ring.

One of my earlier cases was a soldier's wife, middle-aged and hard-working, one of the two or three allowed in camp. She asked me to try and cure an old-standing ulcer just below the knee, on condition that she should not lay up, as she cooked and washed for the men. She rapidly got well. Indeed, I imagine that exercise is useful by promoting circulation and absorption.

The results of this treatment were absorption of the ring, gradual decrease in the diameter of the ulcer, healthy granulation, and cicatrisation. These good results were, I think, dependent on three things—1. The solid pressure produced absorption of the banding ring. I say "solid pressure" because I have learnt by trial that solid pressure overcomes the vital forces, when the pressure of more yielding matter gives way to them. 2. The same solid pressure and the bandage produce similar absorption of the solid or fluid extraneous deposits in the surrounding parts, which, like the ring, had prevented contraction and reparation, and had lowered the interstitial vital powers. 3. The third result, and one which I believe contributes greatly towards the wished-for end, is the exclusion of the air, for all experience goes to show that then healthy and reparative action goes on better and more quickly. Subcutaneous wounds are a ready example. This complete, or almost complete, occlusion acts, I hold, much as the present antiseptic treatment.

I would add that neither in these nor in any other cases could I observe the slightest ill effect, local or constitutional, from the use of the lead. But sometimes the treatment occasioned a large flow of healthy pus, which, affected by the lead, became of an ash colour. My marquee hospital was inspected by a Staff-Surgeon, who thought fault-finding and hasty sternness the best modes of proving his fitness for Inspectorial rank. A man's leg-bandage was slightly soiled. "When did you take that down?" "Yesterday." "Not dressed to-day?" "It is a principle of mine not to disturb such till the third day." "Take it down immediately!" My remonstrance was useless. A large amount of this ash-coloured pus appeared. "Disgraceful, sir; disgraceful! Actually sloughing! I shall report it to the Principal Medical Officer." My reply to the Principal Medical Officer's letter was—"The case of 'sloughing ulcer' was on the third morning after the visit discharged—well, to duty." When pronounced sloughing, the granulations were on a level with the skin, and cicatrisation, commenced at the edges, was extending inwards.

In the case of a little boy who, after fever, had been attacked with sloughing ash-coloured sores about the thigh, at one time exposing the bone and separating the flesh from it for at least an inch and a half, this lead compression, with the internal use of turpentine, were the only things that could stop it. Unfortunately, a practitioner, during my unavoidable absence, thought the sores so healthy that they needed this treatment no longer. The result was that the sloughing unhealthiness returned, and it was only after a very protracted illness that the sores eventually healed.

Applied along the sides of wounds, this solid pressure promotes adhesion throughout; the want of it and the weight of the depending portion allow only of union of the outer edges and of a pus-forming cavity.

On taking over charge of a depôt general hospital in New Zealand there was a case of amputation, the wound unhealed. Eventually the patient died, as I believed, from fever poison, as shown by his symptoms and the appearance of the wound. A case of amputation at the lower third of the thigh was imminent; fever was rife, and I was too confined for space to wholly isolate him from the numerous fever patients. Besides cleaning and disinfecting his ward as well as I could, my aim was to prevent absorption through the wound as far as possible, and heal it by the first intention. The iron sand of that coast seemed more manageable than leaden plates in such a case. The limb was placed on a sand-filled cushion, and sausage-like rolls of sewn bandage filled with the sand were placed equably and continuously over the upper surface. To my mortification about a teaspoonful of pus showed itself within the track of the ligature-threads of the femoral. It was, however, carefully pressed out, the sausage-rolls re-adjusted, and increased pressure applied over the part. The whole wound—all but the mere skin and the ligature-line tracks—healed by the first intention, and the patient recovered rapidly.

In West Australia a pensioner's wife was affected with mammary cancer. A vertical elliptical incision was made, and the breast dissected away, some three, or it might have been four, vessels being twisted. Though a smallish and somewhat spare woman, the breast was large and unusually extensive. Two pieces of splint pasteboard had been soaked till quite flexible, and were covered with oiled lint. These were adjusted so that their meeting edges corresponded with the now line of incision. A bandage was then applied firmly around the chest, as in fracture of the ribs, but of course more extensively, tow and lint being used wherever necessary.

I then left, requesting the medical officer not to remove the bandage for at least three or four days unless obliged. He wrote me he had retained it for one week, when he found the whole of the separated surfaces healed, the only exception being the superficial line where the two edges of skin met.

CASES OF SECONDARY AMPUTATION OF THE LEG.

By E. L. HUSSEY, F.R.C.S.

(*Concluded from page* 280).

Case 6.—A carpenter, twenty-six years of age, not a man of strong constitutional power, was admitted into the Radcliffe Infirmary, February 13, 1871, under my care, with a fracture of both bones of his leg in the middle third. (A full report of the case is given in the *Medical Times and Gazette*, March 15, 1879.)

Abscesses formed in the leg, followed by several attacks of hæmorrhage of a venous character. The ankle-joint became disorganised. The leg was amputated on March 21. An abscess formed in the thigh, followed by attacks of hæmorrhage, for which it was necessary to remove the dressings and open the stump. The man became weaker, and died exhausted on April 17.

Case 7.—A carrier, thirty-seven years of age, labouring under delirium tremens, was admitted into the Radcliffe Infirmary, under my care, May 26, 1871, with a fracture of both bones of the left leg: the tibia was fractured in the middle third, and the fibula at a point rather higher. The injury was received on the 22nd, in a fall, when drunk, in a public-house at Bicester. The limb was placed in splints by Mr. Croft. The man was afterwards attacked with delirium tremens. He frequently jumped out of bed, and when in bed he was continually pulling the splints about.

As the persons in attendance could not control him, he was brought to the Infirmary.

For relief of the delirium opium was administered in regular doses. Meat diet was ordered, with two pints of ale daily. Wine, eggs, and beef-tea were afterwards added. At intervals he was quiet; but during periods of restlessness and excitement the limb was much disturbed. A large abscess formed, and burst in the upper and outer part of the leg, about the spot where the fibula was broken.

On June 17, at midnight, sudden and profuse hæmorrhage of an arterial character came from the abscess. This could not be controlled; and I was summoned. As the only course to save his life I amputated the leg immediately, separating it through the knee-joint. Little relief to his general symptoms followed.

On the 20th, early in the morning, there was some smart hæmorrhage from the stump; it was stopped, however, by moderate pressure. The tongue became dry, and the pulse weaker. He no longer had strength to throw off the bedclothes or other things within reach.

He died exhausted on the morning of the 22nd.

Remarks.—The amputation of a leg below the knee—or, even, of both legs—immediately after a severe injury, or soon after the patient has rallied from the first effects of the shock, is not generally, according to my experience, attended with a fatal result, in a person of sound constitution, and in cases where the effects of the injury are confined to the limb amputated. Three fatal cases only after the operation have come under my care.

Case 1.—An engine-driver, twenty-seven years of age, a man of delicate constitution, subject to fainting fits, was admitted into the Radcliffe Infirmary, under my care, August 22, 1861, with his left leg crushed in its upper third, and with a large lacerated wound of the scalp. He had fallen from his engine in the night, without being observed, and the train had passed over him. He had lost much blood: and he did not rally sufficiently to warrant the performance of an operation till fourteen hours after admission. I then amputated the leg below the knee. His progress was at no time satisfactory. About the end of the second week he had one or two slight shivering fits. He became slowly weaker, with difficulty of breathing. A slough formed on the sacrum; and he died exhausted on October 18. The stump had healed some time before death. Both lungs were emphysematous. In the lower lobe of the right lung was a mass, half the size of the fist, hepatised; and in the middle of it a small deposit of pus, about the size of a pea. The pleura contained two ounces of bloody fluid. The heart was pale in substance, with much fat about it. There were old adhesions of the liver to the diaphragm and to the parietes of the abdomen. In the left knee-joint was about an ounce of thin purulent fluid. The articular cartilages and synovial membrane were healthy.

Case 2.—A railway porter, fifty-four years of age, not a man of strong constitutional power, was admitted into the Radcliffe Infirmary, under my care, early in the morning, December 31, 1870, with his left leg completely shattered by a loaded truck, or "goods waggon," weighing eight tons, passing over the limb at Bletchley during the night. The night was unusually cold, and the thermometer fell to 10° Fahr. Both bones were much comminuted; and several large fragments were protruding through the skin. The soft parts were extensively lacerated and contused. The patient was much depressed, and he was slow in recovering from the shock. Steps were taken, as in similar cases, to hinder any further bleeding, and to supply warmth. Sustenance and stimulants were administered; but he did not rally sufficiently to justify the performance of an operation until late in the afternoon—eight hours from the time of admission, and fourteen hours from the receipt of the injury. I then amputated the leg, immediately below the knee-joint, by double circular incision. There was scarcely any hæmorrhage during the operation. The chief arteries of the limb were ossified. A draft with vinum opii and spir. etheris nitr. was administered afterwards.

The man lingered on, without rallying further, although strong beef-tea, wine, and brandy were taken freely; and he died exhausted thirty-six hours after the operation.

Case 3.—A labouring man, sixty-seven years of age, of feeble constitution, with prominent sternum and contracted chest, was admitted into the Radcliffe Infirmary, under my care, August 22, 1871, with his left leg crushed in the middle and lower third, by a log of timber falling on it, about five hours before admission. Much blood had been lost. He did not rally till the next morning; and I then amputated the leg—about eighteen hours after the accident. The arteries of the limb were cartilaginous in structure, with atheromatous deposit. He became weaker by degrees, and died on the 29th.

The operation of secondary amputation under my care has not been so successful. The only cases in which I have found it necessary to perform a secondary amputation in the leg are those now related—seven in number. Of the first four cases, one was in a special hospital; the others were in private practice. All of the patients recovered.

The last three cases were in the Radcliffe Infirmary, and were all fatal. Another fatal case in the same institution might, perhaps, have been added,—if the patient had given her consent to an operation.

A married woman, fifty-seven years of age, a large fat woman, of general unhealthy appearance, was admitted, on Sunday, February 4, 1877, under my care, with a compound fracture of both bones of the right leg, extending into the ankle-joint.

The injury was received the morning before, by falling down in the street when drunk. She rose and tried to walk; but being unable to do so, she was taken home in a chair. Next day, when the nature of the injury was seen, and understood, the attendance of Mr. Hyde was obtained; and under his advice she was taken to the Infirmary. The limb was placed in splints, in a good position.

Severe inflammation followed, with sloughing, and profuse discharge—purulent at first, and afterwards thin and watery. There was no hope of saving the limb; and it became clear that amputation offered the only chance of saving life. This was proposed, but declined by the patient. She became weaker, and died on March 9.

Oxford.

HABITUAL CONSTIPATION.—The following is a very favourite prescription with Dr. Goodell in the constipation of women:—Ext. coloc. c. gr. ij., pulv. rhei. gr. j., ext. belladon. gr. $\frac{1}{4}$, ext. hyoscy. gr. $\frac{1}{2}$—m. ft. pil. h. s. s. In some cases the sixteenth of a grain of strychnia may be advantageously added. In most cases *massage* is employed with the very best results.—*New York Med. Record*, Nov. 29.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET.

CASES OF THE CHRONIC TETANOID CONVULSION OF CHILDHOOD—SUCCESSFUL TREATMENT BY CALABAR BEAN.

(Under the care of Dr. CHEADLE.)

(*Concluded from page* 290.)

Case 2.—Frank A. P., aged two years, was admitted into the Hospital for Sick Children, Great Ormond-street, on July 5, 1879.

History of the Case.—The child has had diarrhœa for a week; motions offensive; no vomiting; last night convulsed all over. It was born at the full time. Weaned at eleven months. Had an attack of convulsions at six months, which was referred to a fall. At eleven months fits recurred, and it became an in-patient in King's College Hospital, and for three weeks the hands were clenched; but, from description, not in the tetanoid position. Had another fit last winter, and is said to have been unconscious for fourteen days. There are four other children, most of whom had fits when teething. The mother is healthy; has lost no children, and had no miscarriages. The father is asthmatical.

Condition of Patient on admission.—The child was fair-haired, plump, and apparently well nourished, but the anterior fontanelle was still widely open, and the glands in the neck enlarged. The ribs, however, were not beaded, and the thorax was well formed, and the physical signs normal. The abdomen was soft; the liver palpable, but the spleen could not be felt. The temperature 98·5°. The tongue was moist and furred. The pupils were equal and natural, responding freely to light. There was no facial irritability; no otorrhœa; but the bowels were loose. The thumbs were slightly adducted to the middle line; the fingers not at all flexed, except at the terminal joints, and were not rigid. They were slightly separated. There was no puffiness in the dorsum. The toes were a little flexed on the soles; no puffiness in the dorsum; no difference between the two sides; no change during sleep. The reflex excitability of the legs is not diminished. When the child is excited its breathing becomes stridulous and inspiration markedly crowing.

Subsequent History.—The treatment adopted was a teaspoonful of castor oil, and then bromide of potassium mixture four times a day. The disorder of the bowels, however, was found to be considerable, acting from four to eight times in the twenty-four hours, and the motions being loose and containing undigested food. The treatment was therefore solely directed to the remedy of this condition by mixture of red gum and astringents. The child got rapidly well. The laryngismus and muscular contractions of the fingers and toes ceased entirely the day after admission, and did not recur.

Remarks by Dr. Cheadle.—In addition to the absence of complete remissions wherein these cases differ from the tetany of Trousseau, they failed to answer to that test declared by him to be pathognomonic, viz., that the spasm could be reproduced at will by compression of the nerve-trunks, or of the arterial or venous circulation. Pressure of this kind produced no modification whatever of the persistent tonic spasm. The muscles hardened a little on handling, but no distinct exacerbations could be artificially excited. Another feature absent from Trousseau's description is the extreme irritability of certain muscles, notably the facial, so that fibrillar contractions could be excited by merely rubbing the finger over the surface. These cases correspond, however, to the original description in being associated with diarrhœa. The pathology of tetanoid convulsion is, in many respects, obscure; it is probably produced by irritation reflected from chronic intestinal irritation due to catarrh; it is closely associated with the rickety state and with the tendency to laryngismus and general convulsions accordingly; and there is not unfrequently—as in the first of the preceding cases—a neurotic family tendency. One of the most curious observations made was the absolute failure of chloroform to relax the muscular spasm in the slightest degree. The experiment was repeated several times under my own observation, and the most complete narcotism by chloroform produced no appreciable effect whatever upon the contractions. Yet in Trousseau's cases chloroform is stated to have given instant relief. The failure of bromide of potassium and chloral, so effectual in the relief of laryngismus, was equally remarkable. The rapid recovery under Calabar bean, on the other hand, was so striking that the experiment deserves to be repeated on the first suitable opportunity. We must not, however, overlook the fact that in the second case—much less severe than the first—recovery followed the successful treatment of the intestinal flux.

UNIVERSITY COLLEGE HOSPITAL.

CASE OF GUNSHOT WOUND OF LEG, TREATED BY IRRIGATION.

(Under the care of Mr. BERKELEY HILL.)

[For the notes of this and the following case we are indebted to Mr. A. Q. Silcock, M.B., B.S. Lond., Surgical Registrar to the Hospital.]

James P., aged fifty-six, was admitted on October 21, 1879, having been shot in the right leg, which presented the undernoted appearance:—"There is a linear wound situated two inches and a half inside the crest of the tibia, one inch and a half long, running parallel with the long axis of the leg and commencing about the middle of the limb. The edges, which are blackened, are in pretty close coaptation, and are surrounded by an area of redness. Two inches behind this wound is another large lacerated wound four inches and three-quarters long by about three inches and a half broad. The muscular substance of the gastrocnemius, blackened and torn, projects through the wound, forcing the edges of the skin asunder. The finger can be passed downwards about two inches between the gastrocnemius and soleus, and upwards for about three inches and a half into the popliteal space. There is very free venous oozing." The bleeding was stopped by pressure and the application of ice-cold water; the wound was well syringed out with carbolic lotion and dressed antiseptically. On being re-dressed in the afternoon some blackened tough pieces of clot, together with some soft clot, were turned out of the wound by Mr. Hill. The anterior and posterior tibial pulses were found to be normal. The temperature during the day went steadily up from 98° at 2 a.m. to 102° at 11 p.m.

October 23.—Yesterday the temperature ranged from 99·6° to 102°. The dressings have been soaked through by bloody discharge, but there is no redness or tenderness about the wound, and patient says he feels very well. He has had a slight shiver, sweats a little; bowels constipated; pulse 90, soft and regular. The leg is being swung in a cradle.

24th.—The wound is now being treated by constant irrigation with a very weak boracic acid solution, as the discharge had continued to be somewhat offensive. Temperature from 100° to 100·8°.

27th.—There is now some swelling and redness about the wound, and some suppuration; sloughs are commencing to separate; a drainage-tube has been inserted into wound. Tongue slightly furred; bowels constipated. Temperature 100° to 101·2°.

November 3.—The sloughs are being gradually thrown off, and there is less tenderness about the wound. Temperature normal to 100°; tongue cleaner.

10th.—The wound is getting smaller; the granulations are somewhat irritable, but on a level with the skin. The sloughs have separated except at about the lower half of the wound.

Subsequently the wound went on well under red lotion and strapping. Patient left the hospital on December 6. The movements of the ankle-joint were then quite unaffected; the cicatrix was adherent to the muscle and fascia underneath.

LACERATED WOUND OPENING INTO THE KNEE-JOINT.

(Under the care of Mr. MARSHALL.)

James W., aged sixteen years, was admitted on April 18, 1879. During the night, while asleep, he had fallen out of

bed, and had struck his right knee against and had broken the chamber-utensil. Some sharp bleeding occurred, which was stopped by a surgeon, and patient was brought to the hospital, where he arrived three or four hours after the accident. When admitted, the knee-joint was found to be opened by a transverse cut about four inches long just below the patella. The ligamentum patellæ and the capsule of the joint were severed down to the alar and mucous ligaments, and the synovial membrane over the head of the tibia was exposed. In other respects patient was a healthy lad.

The inside of the joint was washed out with carbolic solution, a seton of horsehair put in, and the edges of the wound were brought together and fastened by nine interrupted sutures of carbolised silk, and the wound dressed antiseptically; the thigh was bent on the trunk to relax the extensor muscles, and the limb was put on a suitable back splint. The patella was fastened in position by pads and strapping.

April 19.—Temperature normal, and patient feels no pain in the knee, which is not appreciably swollen.

21st.—Yesterday patient's temperature reached 102·2°, and kept about this all day. This morning it was 102·6°. The joint was found on examination to be full of fluid, and the horsehair seton was removed, the outer sinus was dilated with polypus forceps, and a large quantity of sero-purulent matter escaped; a drainage-tube was then passed in. Antiseptics continued. The wound is healthy.

23rd.—Temperature, 11 a.m., 103·7°; pulse full and bounding. Patient does not complain so much now of pain in the leg, but says that at night, when he is going to sleep, he has starting pains in the joint. Discharge from drainage-tube is copious, but quite sweet.

28th.—Temperature this morning 100°. There is still a great deal of discharge, but antiseptics are continued, and the wound is quite healthy. The edges of the sinus on the inner side are covered with large flakes of fibrine and œdematous granulations.

May 8.—Since April 29 the wound has been dressed (antiseptically) every third or fourth day. The whole wound is looking well, and there is now scarcely any discharge. Pressure is kept up on the joint by pads above and below the patella. Temperature for the last three days has not been above 99·6°.

15th.—The skin-wound has now all healed, except where the drainage-tube was inserted: there the granulations are abundant and projecting. During the last week the temperature has not reached higher than 99·6°.

30th.—In all respects patient has been going on satisfactorily. There are still small granulating surfaces at each side of the wound, but there is no sinus. Patient can slightly extend his knee. The patella is movable over the subjacent bones. Temperature normal.

Patient remained in the hospital until June 19, when he left for Eastbourne.

Académie de Médecine.—Dr. Constantin Paul was elected at the last meeting of the Academy into the Section of Therapeutics by the votes of forty-seven of the seventy-five academicians present.

American Bogus Degrees.—"The Massachusetts Medical Society is apparently ever on the alert to protect the professors and the people against the *bogi*. It has arraigned a lot of spurious schools before the Massachusetts Legislature on the ground of selling diplomas. The following is the sweet-scented list:—American University of Medicine and Surgery of Philadelphia; Philadelphia University of Medicine and Surgery; Physio-Eclectic Medical College of Cincinnati; American Eclectic Medical College of Cincinnati; St. Louis Homœopathic Medical College; St. Louis Eclectic Medical College; New England University of Medicine and Surgery of Manchester, N.H.; University of Medicine and Surgery of Haddenfield, N.H.; and American Vitopathic College of Cincinnati. The hearing was one of the most crowded of the session. Doctors of every description—long-haired wretches whose looks would hang them, clairvoyants, healers of all shades, were on hand to oppose the law to restrict their business. They looked like a collection of snakes and owls protesting against being disturbed."—*Louisville Med. News*, February 21.

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Medical Times and Gazette.

SATURDAY, MARCH 20, 1880.

THE PROFESSION AND THE ELECTIONS.

With a somewhat unexpected dissolution, occurring, moreover, whilst a Parliamentary Committee was inquiring into the wants and desires of the profession, it is only natural that men's minds should be unsettled as to what should be pressed upon the various candidates for Parliamentary honours. But from a view of the past few years, and a consideration of those questions which have been most eagerly discussed, it will not, we think, be difficult to frame certain propositions which contain the essence of the wished-for reforms. And it must not be forgotten that even as regards these the verdict of the profession is not unanimous. There are still some optimists in existence who hold that the profession is best left alone as it is, and who are opposed to all mending of the kind commonly called tinkering.

For our own part we would say that the three most prominent questions as regards what is called medical reform are these:—

First, the direct representation of the body of the profession in the Medical Council, thus converting it more or less perfectly into what is called a Medical Parliament.

Second, the carrying through of some kind of conjoint scheme of examination for admission to the ranks of the profession; and

Third, what is specially felt by English practitioners—the want of some body which could and would confer on them the honourable title of Doctor without the intervention of purely mechanical obstacles.

With reference to the above questions our opinions are well enough known, and our views on them present a tolerably simple solution of the difficulties. With regard to the Medical Council, if it is to be touched at all it should be materially modified. We have now as two of its members two Oxford professors who have as much to do with practical medical education as the man in the moon. The Uni-

versity of Edinburgh—the most important teaching body in the country—boasts of the half of a representative. But we doubt greatly whether any direct representation of the profession on that body would improve matters. We should probably hear of more impracticable schemes and less useful work than even now is the case. But suppose we were to leave matters as they are with regard to representatives, we might easily extend the constituency by merely having the return made, not by the select bodies, which now have full control, but by the great body of graduates, members, licentiates, or what not. Such a scheme is feasible, and could be carried out without any great difficulty.

As regards the various conjoint schemes on the *tapis*, they resolve themselves into one examining board for England, one for Scotland, and one for Ireland. This its supporters call the one-portal system—so-called, we suppose, because it consists of three separate and distinct schemes having no necessary connexion; in fact, totally independent of each other. But here too the way out of the wood seems clear enough. If a one-portal scheme men will have, then let it be a one-portal scheme, and that can only be carried out by the supreme controlling body, be that the Government or the Medical Council. Meanwhile, as soon as a man receives a diploma from any licensing body, he can straightway proceed to register it, and this registration is the only legal evidence of qualification as a practitioner of medicine. All that has to be done to make a perfect one-portal system is, that the qualification, wherever obtained, should not by itself give a right of admission to the Register, but only to an examination, in order to determine whether the newly qualified candidate is fit to become a registered practitioner or not. We confess we certainly do not greatly see the necessity for such a scheme; but if there is a logical outcome of the question it is here. The present schemes all go on the system of perpetuating the worst samples of examining boards; these would very soon find their true level were their licentiates to be time after time rejected by the registering authorities.

Then as regards the question of the *Doctorate*. There can be no doubt that men often desire to obtain such a title after they have been years in practice. To ask such men to begin their studies again, and again go through a certain curriculum, passing certain examinations on their way in stated order, is on the face of it absurd. The want does not apply to Scotland, for there the universities are also teaching bodies, and a man has himself to blame if he does not go through the curriculum required by his university. But in England that is not so. At neither of the great universities can a proper medical education be obtained, and men of all ranks are compelled to resort to the hospital schools, where alone what they want can be got. And, as a simple matter of fairness, we would say that men who have duly passed through a curriculum similar in all respects to that required for graduation in a university, should not be driven back from seeking the degree of M.D., for which they are willing to pass any reasonable examination, by saying that their former examinations and courses of study shall not be taken into account. Many men are driven nowadays, as they have been for generations, to Scotland, Ireland, or abroad for an M.D. degree which they ought to be able to obtain at home. We have no desire to find fault with the Scottish universities for insisting on the residence they demand; they are perfectly within their rights, and seldom have we heard of residence doing anything but good. But these universities were founded and endowed for the benefit and welfare of the Scottish people, and if Englishmen have a grievance they ought to seek for its redress at home. The University of London was specially founded to give this redress; and how has it done so? It is no teaching university; it is only an examining board. Its examinations in medicine are what are commonly called "stiff," but it is not the examinations which deter many good men from seeking its degree in medicine. The obstacles consist in purely mechanical arrangements. The student is opposed by laws inflexible as those of the Medes and Persians. It is not a question of no hope when he enters; there is no hope of admittance except by taking one select and private path which must be found out when the student begins, or thinks of beginning, the study of medicine. It is this which renders the acquisition of a degree in medicine from the University of London an impossibility for any man who has not proceeded in a certain definite manner. Practitioners of whatever standing would have to begin again by passing their matriculation examination, for this liberal University absolutely refuses any university distinctions but its own, and a senior wrangler would have to sit down to do his propositions in Euclid beside the half-fledged schoolboy, were he to seek a degree in medicine in London. Here again, we say, it is where the shoe pinches; but surely the time cannot long be delayed till these regulations shall be rescinded. When that most conservative body the Royal College of Physicians has thrown its doors open to all who may be willing to pass an examination in medicine and midwifery conducted by themselves, the boasted liberalism of the University of London ought, we should hope, to be able to break the chains which have heretofore bound it. If medical men want a diploma of M.D., let them put all thought of Durham or any other place out of their heads; let them set to work boldly and demand the just rights the University of London was constituted to satisfy.

Having spoken of these three main topics, need we say that there are others? The wants of the Public Services would alone suffice for more than one article, but we must pass them by for the moment. Another opportunity will doubtless occur.

CHEMISTS AND DRUGGISTS, AND CO-OPERATIVE SOCIETIES.

The Court of Appeal, consisting of the Lords Justices Bramwell, Baggallay, and Thesiger, gave judgment, on Tuesday, the 16th inst., in the case of the Pharmaceutical Society *v.* the London and Provincial Supply Association, which raised the important question of the right of co-operative societies or stores to carry on the business of chemists and druggists. The Association carried on business as a co-operative store, and kept, among other departments, a department for the sale of drugs, which was managed by a shareholder who was a duly qualified chemist and had duly qualified assistants. The Act of 1868 requires that persons who sell, compound, or dispense poisons, etc., shall be duly qualified and licensed, and imposes a penalty upon "any person" so acting and not being a pharmaceutical chemist registered under the Act; and the first and main question raised was whether the word "person" includes corporations or incorporated associations. Another section of the Act is against keeping an open shop for such sales as are mentioned above, and provides that though the person actually selling is to be liable, the person on whose behalf the shop is kept shall be deemed the seller. The original action was brought by the Pharmaceutical Society in the County Court, and judgment was given for the defendants—the Association. The Society appealed, and the case was heard in the Queen's Bench Division of the High Court of Justice in April last year, before Lord Chief Justice Cockburn and Mr. Justice Mellor, who reversed the judgment of the County Court. The chief ground of their decision was that the Pharmacy Act being a means of protection to

the public, it was essential that no association of persons should be free from liability to a penalty for doing that which, in their individual capacity, would unquestionably be an offence; and that, therefore, all persons, "natural or artificial," ought to come within the scope of prohibitory clauses of the Act. The Society then appealed, and the appeal came before the higher Court on February 23. It was argued at great length, the case lasting two days; and on Tuesday last, as we have said, judgment was given. Lord Justice Bramwell said that the appeal must be allowed. The word "person" did not *primâ facie* include corporations, and was not declared in the interpretation clause to include them. Corporations ought not, consequently, to be held to be included unless there were strong reasons for it to be deduced from the scope and construction of the Act; and, in his opinion, there were no such reasons, but rather the contrary. The offences defined by the Act were (except as to keeping open shops for the purpose) such as could hardly from their nature be committed by a corporation, and could only be personally committed by individuals. If there were a strong reason for holding the Association liable in order to prevent the mischief or danger at which the Act was aimed, it might be otherwise; but it was not so, for the individual who sold the drugs or poison, if unqualified or unlicensed, could always be got at, and if he sold poisons, not being registered and licensed, it would be no defence for him to show that he did so as a servant, whether for an individual or a corporation. No doubt for the keeping of an open shop for such sales, the directors or managers might be liable, for they, in fact, did keep it open for the purpose. But, with that exception, the word "person" in the Act was never so used as to include corporations. This construction did not exclude corporations from selling or carrying on their business, nor prevent the public from dealing with them, and so was not in restraint of trade. The person who actually sold was required to be registered; but there was no need to hold the corporation itself to have committed an offence if the person who sold was not registered; and, indeed, if it was an unlawful act it would be beyond the authority of the directors.

Lords Justices Baggallay and Thesiger delivered judgment to the same effect, and Lord Justice Baggallay said that if the object of the Act—the protection of the public—required that such associations as the appellants' should be included, and the words of the Actallowed of it, such a construction might possibly be adopted; but it was not so, for the object was to prevent the dispensing of poisons and drugs by unqualified persons, and a corporation could not dispense or compound, or could only do so by an assistant, and if he was duly qualified, as in this case, the object of the Act was attained, especially as the corporation would be liable by an express enactment for keeping open a shop for such sales by unlicensed persons. Judgment was accordingly for the appellants—the Association.

HOW TO KILL BACTERIA.

In a lecture given before the Berlin Medical Society, December 3, 1879, Dr. Wernich (who, as our readers may remember, was formerly a medical professor in Japan) offered some interesting remarks, *Ueber Bacterientödtung*, or, as we have translated it above, on how to kill bacteria. He begins by pointing out that we must have some certain method of deciding between dead and living bacteria, and that as in the lowest of these organisms the only vital function which we can recognise as performed by them is that of unlimited multiplication under appropriate conditions, their reproductive capacity must be taken as the test of their vitality. A fallacy, however, comes in here which complicates the problem—if the cultivating fluid is not rightly chosen the bacteria fail to multiply. With care, however, this difficulty may be avoided, and after a sufficient preparatory training Dr. Wernich believes that by a modified form of Klebs's *"fractionirte Cultur,"* which he terms the bacterioscopic method, the distinction between living and dead bacteria may be made with certainty. The principle is simple. If, after rigorous exclusion of all possible causes of impurity from without, a drop of the bacterial fluid to be tested causes cloudiness in an appropriate cultivating medium, which cloudiness the microscope proves to depend on the presence of multitudes of bacteria, and if this experiment can be repeated over and over again by cultivating the new bacteria in fresh media, the first bacteria were living; if no cloudiness occurs under these conditions, they were dead. We should state here that Dr. Wernich's experiments on this subject were partly made in Professor Cohn's laboratory at Breslau, the special organism investigated being the *Micrococcus prodigiosus*, or blood mould of the ancients. The research is given in detail in *Virchow's Archiv*, Band 78.

Assuming, then, that we can distinguish between dead and living bacteria by the reproductive capability of the latter, how can we kill bacteria and prevent their reproducing their kind? Dry heat seems to be one of the most powerful physical agents for effecting this. According to Wernich, the bacteria of putrefaction are killed by a temperature of 130° to 150° Cent. even in three to five minutes. The *Micrococcus prodigiosus* is rendered absolutely sterile at a temperature of only 75° to 80° Cent. But some organisms, for example the *Bacillus subtilis* of hay infusion, exhibit enormous resistance even to the protracted action of heat (Cohn), and, at any rate in the case of the hay bacillus, it is the spores which still retain their vitality even after long boiling. The presence or absence of spores will therefore to a great extent determine whether a given species of micrococcus or bacterium resists destruction by heat, chemical agents, etc., or not.

It is well known that certain substances—sugar, dialysable albuminates, and the elements potassium, phosphorus, magnesium, and sulphur—are necessary to the multiplication of bacteria, but Dr. Wernich mentions another less known fact, namely, that if any one of these substances be absent from the nutritive fluid, the bacterial spores, instead of multiplying, pass into a state of rest (*Dauerzustand*), in which they may remain indefinitely. Dryness has the same effect, and, according to Koch, the spores of the *Bacillus anthracis* or bacillus of malignant pustule can remain in the dry state for years, be moistened and dried again without loss of reproductive power. Hence, if in any locality these spores have once developed, the chances of the disappearance of the disease there are very small. On the other hand, excess of moisture destroys bacteria with great certainty. The development of *Bacillus anthracis* is checked by distilled water, and, as our readers may remember, Professor Virchow, in his lecture on the Plague (*Medical Times and Gazette*, vol. i. 1879, page 286), inclined to the belief that the report was true that "plague germs" lose their infective power by immersion in water.

The effect of light on micrococci is absolutely *nil;* they get on equally well with and without it. On the other hand, it is said that at the positive pole of a moderately strong galvanic current they always die, while at the negative pole they develope to a slight extent. It would take up too much space to enumerate all the gases, acids, salts, and organic substances which are reputed to destroy bacteria outside the body. That they do so *if brought into intimate contact* with them is scarcely doubtful; the important

point is to find poisons which will kill bacteria within the human organism without injuring the latter. It is questionable whether at present we possess any such. Dr. Wernich puts the question: Why do bacteria not live for ever?—why, with an apparent sufficiency of nutritive material, do they die? Why do infectious diseases like small-pox and scarlet fever, which are probably due to organisms, last only a certain time? The answer seems to be, that "it is the *products of the tissue change of the living bacteria* which causes their ultimate destruction." About four years ago Salkowski found that bacteria would not propagate in some three-years-old ascitic fluid which had gone through all the stages of putrefaction. Since then this has been explained by the discovery of carbolic acid by Baumann, of skatol (*Medical Times and Gazette*, 1879, vol. i., page 154) by Brieger, of hydrocinnamic acid and phenylacetic acid by E. and H. Salkowski as products of putrefactive processes, *i.e.*, of bacterial tissue change.

These bodies, as well as indol, which also developes under these conditions, are intense bacterial poisons; and while skatol is the strongest of them all, carbolic acid is the weakest. Wernich has found that 1 part indol per 1000 of fluid prevents putrefaction, whereas 5 parts carbolic acid per 1000 are required; 0·4 skatol per 1000 prevents the propagation of bacteria, but carbolic acid must be 5 per 1000 strong; lastly, 0·5 skatol per 1000 *kills* bacteria, while we must allow a 1 per 50 solution of carbolic acid to remain long in contact with them to produce the same effect. Yet Dr. Wernich does not think carbolic acid will lose its position as an antiseptic in consequence. Its solubility and cheapness will prevent that: some of the other substances just named take 2000 parts of water to dissolve them.

The practical question now suggests itself (Dr. Wernich supposes that it is put to him)—If we had a patient ill of a disease proved to be due to the bacteria of putrefaction (*Fäulnissbacterien*) ought we to give him, say, indol? Dr. Wernich answers, "No; our knowledge of the diffusion and action of it and similar drugs within the body is at present as good as *nil*. We can scarcely conceive that the intimate contact of drug and bacteria necessary, as experiment shows, for the destruction of the latter can occur there." Is there no hope, then, in this direction? Dr. Wernich thinks that we should carefully investigate the conditions of development of those bacteria which can enter and live in our bodies; and, secondly, that at present we should devote our chief attention therapeutically to keeping the bacteria out of the body, rather than attempting to destroy them when they have once entered it. As in surgery so in medicine, exclude the germs if possible; and if sceptics say that there are no germs, we can fall back on the dictum of the great botanist Naegeli (*Die niederen Pilze in ihren Beziehungen zu den Infectionskrankheiten*; Munich, 1877), that the poisons which produce disease cannot be gases or simple chemical bodies, and *must* be some sort of *organised* material.

The above is but a brief abstract of Dr. Wernich's lecture, yet we hope it may be found not altogether wanting in interest or suggestiveness.

THE WEEK.

TOPICS OF THE DAY.

A MEETING of the Council of the Hospital Sunday Fund was held last week, under the presidency of the Bishop of London, to receive a deputation from the Royal Hospital for Incurables, who desired to urge upon the Council the claims of the institution to participate in the benefits of the Hospital Sunday collection. After a full discussion, the Council resolved unanimously that, while thoroughly recognising the admirable manner in which the Royal Hospital for Incurables was administered, they regretted their inability to recommend its claims to the benefit of the Fund, and that they considered it most expedient to adhere to the principle that no institution to which admission could be gained only by election from the general body of subscribers be eligible for grants from the Fund.

The fourth annual meeting of the Metropolitan and National Nurses' Association was held on the 11th instant at Grosvenor House, the chair being taken by the Earl of Pembroke. The report showed that the nursing staff now numbers twenty-five, and during the past year four ladies had been trained for district nursing work. The number of cases attended was 3530, or upwards of a thousand more than in the previous year. The balance at the bankers, however, was smaller than at the last meeting, and an appeal was made for increased subscriptions to meet the growing expenditure. Lord Shaftesbury moved, and Mr. Thomas Hughes, Q.C., seconded, the adoption of the report, and a resolution was passed pledging the meeting to support the institution and extend its benefits.

The Hampstead Small-pox Hospital case was again brought up in the law courts last week. On the case (Hill and others *v.* The Managers of the Metropolitan Asylums District Board) being called in the Court of Appeal, the Attorney-General, for the defendants, made an application for a stay of proceedings, pending an appeal to the House of Lords, the proceedings being the issue of an injunction for taxation of the costs and for the staying of an arbitration to assess damages. On the other side, Mr. Herschell, Q.C., made a cross application that the costs should be taxed upon the higher scale and be paid at once, upon an undertaking for repayment in the event of the case being reversed. On the conclusion of the arguments judgment was given, the material issue decided being that the Hampstead Hospital is to be closed, under the injunction, until the House of Lords decides the whole matter in all its legal bearings.

The annual festival of University College Hospital was held last week at Willis's Rooms, under the presidency of Sir Julian Goldsmid, M.P. His Royal Highness Prince Leopold, who had consented to preside upon the occasion, was prevented from being present on account of a slight accident, which, in the opinion of his physician, rendered it unadvisable that he should leave Buckingham Palace that evening. The Prince, however, expressed a hope that upon the next annual anniversary he should be able to take the chair. The Chairman, in referring to the financial position of the Hospital, said that the requirements of modern sanitary science had compelled the Committee of Management to go to a considerable expense in the improvement of the institution last year, and the opportunity had been taken advantage of to add forty new beds to the accommodation previously existing. This had greatly increased the expenses, and the deficit for the year 1879 amounted to something like £4000, which would necessitate a more than ordinarily liberal subscription to place the funds of the institution on a satisfactory basis. The donations announced upon the occasion amounted to nearly £1550.

At the recent examination, held in London, five candidates, it will be remembered, presented themselves for admission to the Medical Department of the Navy, and, if rumour may for once be credited with speaking the truth, even these five failed to convince the examiners of their competence for the Service. After this, there surely can be no question about the necessity of an inquiry into the best means of making her Majesty's Naval Medical Service more attractive to fully competent members of the profession; and we are glad to hear that such an inquiry is about to be instituted. We shall give further particulars next week if anything decisive has transpired.

It will not be very surprising to learn that the completion of the great St. Gothard tunnel had become almost a matter of life and death for the workmen engaged in the operations, especially for those of them who were compelled to work at a considerable distance from either entrance. It had been shown in the case of the Mont Cenis tunnel that the temperature of an uncompleted underground passage increases in proportion to its length, but the experience of the St. Gothard works far exceeds anything encountered in the former undertaking. The heat at the farthest point of working on the Göschenen side, 7800 metres from the entrance, reached 100° Fahr., and the labour, under such circumstances, of walling the roof and sides has been so severe that masons for the work were procured with great difficulty. Nor was the heat the only trouble; the supply of air sent into the galleries by the compressors was barely adequate to the needs of the men and horses they contained—which is not to be wondered at when it is remembered that it had to be forced a distance of five miles. The smoke from four hundred lamps, and the gas engendered by perpetual explosions of dynamite, still further vitiated such atmosphere as there was; while the stench arising through the probably unavoidable absence of any attempt at sanitary arrangements was alone enough to create a pestilence. It will be readily understood that among men exposed for eight hours daily to such conditions as these, new forms of disease were developed, and that the extremes of temperature they were compelled to endure were a fertile cause of inflammation of the lungs and consumption. When a workman fell ill in the tunnel he was taken to a jet of air, if such was near; if not, a hole was broken in the air conduit, and his face held over it. The workmen are nearly all Piedmontese, and, though for the most part slightly built, and in appearance far from robust, they are said to be very industrious, sober, and efficient.

The recommendations of the Army Commission, which has been for some time sitting at Calcutta to consider the future of the Army Service in India, have just been made public. Some of the changes recommended are sweeping. Consolidated retirement after thirty-two years' service is to be the rule, but those retiring before the completion of thirty-two years' service are to be liable to be recalled for duty in case of national emergency, or if required. It is further suggested that the Indian Medical Service be re-cast; the Civil Medical Service to be separated from the military, and the latter amalgamated with the British Army Medical Department, forming one list; and the course of instruction in the school at Netley Hospital to be abolished. At the present moment these are only recommendations, but there is every reason to believe that much that has been put forward will eventually be adopted, and it is not improbable that the changes may take effect from the beginning of the next financial year.

The champion swimmer, Captain Webb, has recently completed his self-imposed task of remaining in the water for sixty hours continuously. The feat was accomplished in the whale tank at the Royal Aquarium, under the supervision of persons appointed to see that the conditions of the wager were properly carried out. The mania for exhibitions of endurance has greatly developed of late; but it is not so easy to see any good end such exhibitions serve. Captain Webb has certainly fairly earned the right to be looked upon in the light of an amphibious animal. After nearly forty hours of alternate swimming and floating he was examined by Mr. Bond, of the Westminster Hospital, who found the temperature of his body to be 97°, and he was pronounced to be in wonderfully good condition, considering the arduous nature of his attempt. The capability of remaining immersed in the water for so long a period must, however, be limited, though Captain Webb is not the only man who has demonstrated it, as those of our readers will admit who remember the extraordinary case of Brock, the Yarmouth boatman, who was capsized at sea off Yarmouth, and who, having freed himself of his heavy sea-boots whilst in the water, by means of his knife, was ultimately picked up near the mouth of the Thames, after, we believe, forty-eight hours struggling in the open sea. Against this latter feat Captain Webb's recent achievement sinks into insignificance.

Among the names of those gentlemen on whom it is announced the honorary degree of LL.D. will be conferred by the University of Edinburgh at the next graduation ceremonial we observe those of Dr. Balfour, Emeritus Professor of Botany in the University, and of Dr. William Farr, F.R.S., late of the Registrar-General's Office.

THE PHYSICIANSHIP TO THE QUEEN IN IRELAND.

Dr. John Thomas Banks has been appointed by the Queen to be one of her Majesty's Physicians in Ordinary in Ireland, in succession to the late Sir Dominic John Corrigan, Bart., M.D., deceased. The appointment is one which will, no doubt, give general satisfaction. We had already pointed out, in the *Medical Times and Gazette* for February 14, 1880, Dr. Banks's claims to the high honour which the Queen has been graciously pleased to confer upon him.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

At the meeting of the Council of the Royal College of Surgeons held on Thursday, the 11th inst., Mr. Edward Bellamy (of the Charing-cross Hospital) and Mr. Jeremiah M'Carthy (of the London Hospital) were elected members of the Board of Examiners—Mr. Bellamy as an Examiner in Anatomy, and Mr. M'Carthy as an Examiner in Physiology. Mr. Power is now, we think, the only member of the Board who is also a member of the Council, and would most naturally be elected as chairman of the Board, but as there are only four members on the Physiology division, while there are five on the Anatomy side, it is much more probable that the chairman will be chosen from among the Examiners in Anatomy; and in that case we expect to see the lot fall upon Mr. Christopher Heath. The subject of the proposed International Medical Congress, 1881, was brought before the Council, and it was resolved that the President of the College for the time being shall be the delegate from the College to the Committee of Arrangement. The report of the Committee on By-laws relating to fees was considered at some length, and was in general approved and adopted, but subject to confirmation at the next meeting; after which we will give the resolutions arrived at.

ENGLISH RATES OF MORTALITY.

At a recent meeting of the Statistical Society, Mr. Thomas A. Welton read a paper on "Certain Changes in the English Rates of Mortality." In opening this subject he remarked that while the leading fact in relation to the statistics of mortality is the regularity underlying every variation of death-rate, it is well, on the other hand, to examine from time to time the data for long periods, and to consider the stability or changefulness of the phenomena. Tendencies may thus be discovered, which, in a protracted series of years, would bring about unmistakable results. Mr. Welton based his comparisons on the six quinquennial periods extending from 1846 to 1875. On this basis he found that, according to the death-rates given by the Registrar-General, the mortality of both sexes at ages from five to twenty-five had certainly been reduced; but this abatement had been attended by an aggravation of the mortality at higher ages, putting aside

epidemic years, and that such aggravation had been far more considerable among males than among females. Mr. Welton next referred to different sets of tables prepared by him as compared with Dr. Farr's English life table, and he showed that the period of years before the persons who are born are reduced to half their original number was, according to these tables, as follows:—By Dr. Farr's table —males, 44·4; females, 46·4: female expectation greater by two. By experience of 1856-60—males, 46·5; females, 48·9: female expectation greater by 2·4. By experience of 1871-75 —males, 45·8; females, 50·9: female expectation greater by 5·1. In conclusion he adverted to the causes of the increased mortality among males aged thirty-five to sixty-five, the result arrived at being that this increase had not been largely due to epidemics, to consumption, or to diseases of the stomach and liver, but to disorders of the lungs, heart, brain, kidneys, and to cancer.

THE PRESENT METROPOLITAN WATER-SUPPLY.

Dr. Tidy has submitted his annual report to the Society of Medical Officers of Health on the quantity and quality of the water supplied to London during the year 1879. He shows that on an average 32·7 gallons of water per head have been daily supplied during the year to upwards of 4,000,000 of people by the eight London water companies. This quantity is, in his opinion, at least one-third in excess of what is necessary, or even, as he thinks, advisable. The vast population within the districts of the companies reside in 573,792 houses, of which about a quarter are on the constant service. No less than eighty-two acres of land are covered by filter beds for the efficient filtration of the water supplied. One-half the water, in round numbers, was taken from the river Thames, and the remainder from the Lea, the New River, and from chalk wells. Dr. Tidy adheres to his frequently expressed opinion, that, considering all the facts of the case, no better sources of water-supply can be found than the rivers Thames and Lea. Though the year under notice was an exceptionally trying one for the water companies, the excessive rainfall having rendered the Thames thick and turbid more frequently than usual, the water supplied by them was, Dr. Tidy thinks, fairly good. It was to have been expected, he adds, that the analyses would show a larger average amount of organic matter than in previous years, and the only thing which need surprise us is that it was not greater than the results prove it to have been. Dr. Tidy concludes his report by expressing a hope that when the companies shall have passed into the hands of Government the general management of the several works will be as good as now, and that the effect of the change the public have clamoured for, and the more efficient working that the public expect, will be seen, not merely in lessened taxation, but in the improved health of the people and in a lower death-rate.

EDINBURGH ODONTO-CHIRURGICAL SOCIETY.

At a meeting of this Society in Edinburgh on Saturday (Mr. W. Campbell, Dundee, in the chair), Mr. W. Bowman Macleod brought under the notice of the members a new combination anæsthetic which he had been using for some time past in his private studies with very successful results. It consisted in combining the administration or the exhibition of ethydene dichloride with nitrous oxide gas. The manner of administration was simple. It consisted solely in placing a small piece of sponge, retained in position by a clip, within the way tube or supplementary bag of the nitrous oxide inhaler, leaving sufficient space on each side of the sponge for the free passage of the nitrous oxide into and out of the bag. Only a very small quantity of ethydene dichloride was required viz., about half a drachm. The time of inhalation to produce anæsthesia measured from sixty to ninety seconds, and the time of complete anæsthesia—during which time the sensations were said to be more profound and agreeable than when induced by nitrous oxide gas alone—was from one and a half to two and a half minutes, which embraced a period of time sufficient to enable most of the operations required in the dental surgery to be comfortably performed. He further mentioned that in all the cases in which he had used this anæsthesia—upwards of sixteen in number—there had been a complete absence of sickness, and only one case in which there might be said to have been the slightest approach to stertorous breathing. The pulse was slightly more accelerated than normal, but was full and strong, and there was that absence of lividity which renders administration of nitrous oxide so disagreeable, and in some cases repulsive to the onlooker—the lips alone, on the removal of the face-piece, presenting in any case, and that only occasionally, the faintest appearance of lividity. It had also this decided benefit over the single administration, that it produced a relaxation of the muscles, so contrary to the almost spasmodic rigidity induced by nitrous oxide. The Society resolved to experiment with this anæsthetic.

PROFESSOR FLOWER, F.R.S.

This gentleman will deliver his last lecture on the Comparative Anatomy of Man in the theatre of the College of Surgeons this day (Friday, the 19th). Professor Hutchinson, F.R.C.S., will commence his course of four lectures "On some of the Surgical Bearings of Gout and Rheumatism," and two lectures "On the Etiology of True Leprosy," some time in June next. He will be followed by Professor Butlin, who will deliver three lectures "On the Relations of Sarcoma to Carcinoma"; after which Mr. B. T. Lowne will deliver three lectures "On the Development of Sensory Organs."

THE DECEMBER RETURN OF THE REGISTRAR-GENERAL FOR IRELAND.

The return of the Registrar-General in Ireland for the fourth quarter of the year 1879 records the registration during that period of 30,668 births and 24,497 deaths. The births were equal to an annual birth-rate of 22·9 per 1000 of population, as against 34·2 per 1000 registered in England; the deaths represented an annual rate of 18·3 per 1000, as against 21·4 in this country. It is remarked in the return that the birth-rate in Ireland is again under the average of the corresponding quarter of the previous five years to the extent of 1 per 1000 of the estimated population. The death-rate is above the average for the same period, the excess being 1·6 per 1000, and is the highest registered in the fourth quarter of any year since registration of deaths commenced in Ireland in the year 1864. As some explanation of this latter fact it has to be considered that although the weather during the first two months of the quarter was comparatively much more favourable than it had been during the preceding portion of the year, during December it became unusually severe, and contributed much to increase the mortality amongst the very young and very old. The suffering caused by the extremely bad harvest, and through the depression of trade, is also, no doubt, responsible to some extent for the excessive death-rate of the quarter under notice; but it is stated that during that period none of the registrars return any deaths as attributable to starvation, although some of them admit that want may have led to increased sickness and liability to disease. The deaths from the seven principal zymotic diseases were slightly under the corresponding quarter of 1878, but above the average mortality for the fourth quarter of the three years 1876 to 1878. Scarlet fever has been steadily increasing throughout the

whole of last year, and for the three months ending December was credited with having caused 589 deaths. Measles and whooping-cough were the next most fatal, the former with a mortality of 319 and the latter with 459. Of the 24,497 deaths registered during the quarter, 3968, or 16·2 per cent., occurred in public institutions.

MEDICAL SOCIETY OF LONDON.

The following is a list of the officers and Council of the Medical Society of London for the session 1880-81:—*President*: F. J. Gant, F.R.C.S. *Vice-Presidents*: C. Theodore Williams, M.D.; W. F. Teevan, F.R.C.S.; Alfred Wiltshire, M.D.; J. W. Barnes, F.R.C.S. *Treasurer*: Francis Mason, F.R.C.S. *Librarian*: H. Royes Bell, F.R.C.S. *Secretaries in Ordinary*: D. H. Goodsall, F.R.C.S.; T. Gilbart Smith, M.D. *Secretary for Foreign Correspondence*: J. I. B. Berkhart, M.D. *Council*: J. Astley Bloxam, F.R.C.S.; Percy Boulton, M.D.; Thomas Bryant, F.R.C.S.; R. Brudenell Carter, F.R.C.S.; John Cockle, M.D.; Walter Coulson, F.R.C.S.; A. E. Cumberbatch, F.R.C.S.; W. H. Day, M.D.; T. S. Dowse, M.D.; Sir Joseph Fayrer, M.D.; Clement Godson, M.D.; F. de Havilland Hall, M.D.; Thomas Harvey Hill; Constantine Holman, M.D.; Malcolm Morris; Edmund Owen, F.R.C.S.; H. E. Sewill; Heywood Smith, M.D.; J. C. Thorowgood, M.D.; L. S. Forbes Winslow, M.D.

WHO INVENTED THE MODERN PROCESS OF MAKING SALICYLIC ACID?

A remarkably able and interesting judgment was delivered in the Court of Appeal on Monday last, in a case which raised the question of who was the real inventor of the modern process for the manufacture of salicylic acid. The action was brought by M. Friedrich von Heyden against Messrs. M. Neustadt and Co., of Mincing-lane, to restrain an alleged infringement by them of the plaintiff's patent for making the acid. The patent was granted February 17, 1874, to Mr. J. H. Johnson, for an invention communicated to him by Professor Hermann Kolbe, of Leipsic, Mr. Johnson being a trustee for Kolbe. The patent was afterwards assigned by Johnson and Kolbe to the plaintiff. The defendants had been selling in this country salicylic acid imported by them from the firm of Emanuel Merck, of Darmstadt, manufacturing chemist, which had been made by that firm according to a method described in a patent on November 3, 1877, to Max Neustadt, one of the defendants, as a trustee for the firm of Merck, and afterwards assigned to that firm. Vice-Chancellor Bacon granted the injunction claimed by the plaintiff, and the defendants appealed. The appeal was argued at great length, before Lords Justices James, Brett, and Cotton; and the judgment of the Court was delivered by Lord Justice James. It is very elaborate and minute, and is well worth reading. But it is impossible for us to give it at length, and equally impossible to do justice to it by any summary of it. We must be content to say that the whole history of the manufacture of salicylic acid was gone into. For the defendants a mass of paragraphs was produced, from scientific memoirs and treatises, to show that various chemists had been on the right track for the manufacture of salicylic acid, and it was contended that the invention was not a novelty; and, further, infringement was denied. But, Lord Justice James said, "We have this broad fact: that, with all the knowledge communicated by the chemical publications, no one did, before the patent, make an ounce of salicylic acid through the use of caustic soda, or by any other process make salicylic acid at any practical price for general use. . . We are satisfied that the objection that there was a prior anticipation of the discovery has totally failed." And again: "No one, before the patentee had practically or theoretically taught the world how to make, out of such abundant or cheap materials as soda, carbolic acid, carbonic acid gas, and hydrochloric acid, the rare and expensive strong salicylic acid,—no one had ever taught the world the simple and fruitful chemical truth that all that was required to effect this wonderful transmutation was to make the carbolate of soda perfectly anhydrous and perfectly desiccated." The result had been that while salicylic acid was quoted in 1868 at 13s. an ounce, it is now sold at 7s. 6d. a pound. The judgment was that the plaintiff has established the validity of his patent, and the infringement of it; and the appeal was dismissed.

DR. FARR'S TESTIMONIAL FUND.

On Wednesday afternoon last a preliminary meeting of the general committee which has been formed for raising a testimonial fund for presentation to Dr. William Farr, F.R.S., was held in the Library of the General Register Office, by permission of the Registrar-General. The Earl of Derby presided as chairman of the committee. An executive committee, limited to ten members, was empowered to take any measures that might appear necessary or desirable in order to secure the success of the object in view. Mr. R. Biddulph Martin, of 68, Lombard-street, E.C., having previously signified his consent, was appointed honorary treasurer of the fund; and Mr. Noel A. Humphreys, of the Registrar-General's Office, Somerset House, honorary secretary to the committee. A subscription-list, which was started at the meeting, will shortly be published; and in the meantime, any of Dr. Farr's friends or admirers who are willing to join the committee, or to promote the success of the testimonial in any other way, are requested to communicate with the honorary secretary.

SUPPURATION OF JOINTS AFTER ACUTE RHEUMATISM.

This sequela of rheumatic fever is admitted by all authorities to be very rare, and some have even doubted its occurrence. Nevertheless, Dr. W. Körte, Assistant-Surgeon to the Berlin Bethany Hospital (*Berl. Klin. Wochenschrift*, No. 4, 1880) reports *six* cases which came into the surgical clinic between August, 1877, and June, 1879. Four of them were treated for the rheumatism in the medical wards and transferred, and the two others came directly under surgical reatment from outside; but in every instance there was no possible doubt of the true nature of the primary disease. None of the cases were pyæmic. All were women of ages ranging from twenty-one to forty-eight years. Two were previously strong, the rest of delicate constitution. Two had endocarditis. All had been treated with salicylic acid, but the usual effect was not produced by it, and the disease seemed to linger obstinately in one of the affected joints after the others had recovered. The suppuration was indicated by severe pain on movement and handling, by distension of the joint capsule, redness and swelling of the soft parts, and fever, especially at night. In three patients the knee-joint was affected, and in three the ankle-joint. In two at least of the latter the inflammation was limited to the synovial membrane, and the cartilages were intact; these were treated antiseptically with incisions on both sides of the joint, washing out with 3 to 5 per cent. carbolic solution and drainage. Recovery took place with movable joints. The third ankle-joint required partial excision, and its movement was consequently less perfect than in the other two. All three cases of suppuration in the knee-joint had advanced to injury of the ligaments, cartilages, and ends of the bones, and resection was necessary in all. Two of these patients recovered extremely well; the third died of gangrenous bedsore. Dr. Körte considers that the treatment adopted for the ankle-joint is the best possible, when the deeper parts of the

joint are still intact, and the suppuration remains what he terms "catarrhal." He suggests that the frequency of suppurative joint-affections after rheumatic fever in the cases before us may have depended on the character of the epidemic during which these cases occurred, just as some epidemics of typhoid fever, scarlet fever, etc., are specially followed by joint-inflammations. Curiously enough, he does not refer to the salicylic treatment as having any possible causal connexion with their occurrence.

THE EDINBURGH ROYAL ASYLUM FOR THE INSANE.

In reading his annual report at the recent meeting of the Edinburgh Royal Asylum for the Insane (previously referred to in these columns), Dr. Clouston, the Physician-Superintendent, after dealing with the statistical portion of the subject, observed that no question was more frequently asked in regard to mental disease than this: "What is the cause of the disorder?" On this point he said that every thoughtful mind must recognise the fact that if weakness and predispositions are transmitted from one generation to another at all, there must be more chance of brain-weakness being thus transmitted than weakness of any other organ. It is on the brain that the anxieties and strains of life act, that the poverty and struggle for existence chiefly tell, and that the exhaustion from dissipation and bad lives for the most part takes effect. Looking at the lot and lives of mankind, it seems more wonderful to have so many sound brains than to have the few nnsound ones. It shows clearly that nature tends more towards a good sound type than a bad one; that the fittest tend to survive and propagate their good rather than their bad qualities. There is no class of constitutional disease so complicated and difficult to trace as insanity; not only must the bodily history of the patient and that of his ancestors be taken into consideration, but also his subtle and difficult mental history. It is so difficult to unravel so tangled a web satisfactorily in any one case that it has scarcely ever been done. Beyond a doubt, a man may suffer in his mind for the sins of his grandfather, and his mental power may be affected adversely by the sort of lives his parents led. When the cause of any case of insanity is stated to be one fact or event in the life of the individual affected, it may safely be concluded that this is merely one link in a long chain of causes. The table of causes, therefore, may be taken to represent the most obvious or the strongest antecedent facts that had a causal relation to the disease, and not the whole causation. Looked at in this light, many cases in which intemperance is put down as causing the disease may be regarded as cases of persons with very weak brains, which a small quantity of alcoholic liquor served to upset, or with slight controlling power over their appetites and actions at best, so that excess was almost natural to them; or the excess may have been only one of the first symptoms of the disease which had already begun. In the same way climacteric periods, snch as old age and childbirth, should be regarded as rather the occasions than the causes of insanity. So also where grief, disappointment, anxieties, and affliction are stated to have been the causes, many of the patients were no doubt predisposed in other ways. It is a striking fact, however, in connexion with the recent hard times, that "bnsiness anxiety" is put down as the canse of the disease in no less than twenty-four cases admitted during the past year, being half as often again as this cause ever before appeared in the records of the Asylum. It is often asked if the hard times have sent more people to this Asylnm than usual: some admissions are no doubt to be attributed to this cause, but the number of them is very few indeed compared with the great number of admissions. But it is always to be kept in mind that those very persons might have been upset had they been over-prosperons. There are persons of so unstable a brain-equilibrium that if they do not get overset one way, they do another. If it is not distress, it is dissipation; if it is not starvation, it is surfeiting or drink; if not religious over-excitement, it is over-speculation. There is no more interesting fact in the history of mental disease than that amongst the most sober, moral, and self-restrained of all the English societies, the Society of Friends, the malady has been proved by statistics to be as common, if not more so, than in the general population. Such a fact should make us careful in jndging of the causes of this terrible malady, and absolutely disproves those sweeping statements that most of the insanity of the kingdom is due to drink. The fact is that it would reqnire harmonious relations to exist between the organism and its concomitants for many generations before brain-weaknesses could be eradicated.

MEDICAL PARLIAMENTARY AFFAIRS.

Glandered Horses.—In the Honse of Commons, on Thursday, March 11, Sir William Fraser drew attention to the recent action of the Kensington Vestry in requiring the slanghter of 116 horses during the past six months to check the spread of glanders. He desired to know if steps would be taken to insure compulsory burial of horses affected with that disease, so as to provide against the carcases being sold for meat. On Monday, Lord George Hamilton said, in reply, that no facilities exist in the metropolis for burying carcases. The local anthorities are empowered to remove the carcases when properly disinfected, to a knacker's approved by the Privy Council, where they are destroyed by boiling. The greater activity of the local anthority in prosecnting persons under the Contagious Diseases (Animals) Act probably accounts for the apparent extension of the disease.

London Water-Supply.—Mr. Cross, in reply to Mr. Goschen, said that the companies had undonbtedly taken advantage of the Metropolis Valuation Act for assessing the water-rates; but Parliament could not alter the price of any commodity snch as gas and water unless the company applied for further powers. With respect to the Southwark and Vauxhall Company, he would take care when the Bill was discussed that additional rents should not be charged, and he would pay no attention to any endeavonr to raise the rents.

Indian Medical Service.—Mr. E. Stanhope, in reply to Sir T. Bazley, said that application had been received for a modification of the recent order abolishing the grade of Surgeon-General and reducing the nnmber of Deputy Surgeons-General. These applications were now under the consideration of the Secretary of State.

Small-Pox and Vaccination.—On Monday, Mr. Sclater-Booth, replying to Dr. Playfair's inquiry, said that at the beginning of the year there was an increased prevalence of small-pox in the metropolis, confined for the most part to four or five parishes. During the last four weeks the returns from the Asylums Hospitals have been stationary. The vaccination arrangements for the metropolis work well and give satisfaction. In consequence of the fluctuating character of much of the population of London, the metropolis is not so efficiently vaccinated as the rest of the kingdom.

Superannuation of Poor-law Medical Officers.—In reply to Sir J. T. Lawrence, Mr. Sclater-Booth said that he was not satisfied with the reasons furnished by the Tenterden Guardians in declining to grant a superannuation allowance to their Medical Officer, Mr. Terry. It was needful, however, to know what proportion or relation the salary and public services of a medical officer bear to his whole professional emoluments and duties before deciding whether the guardians had failed to exercise a right jndgment.

The Artisans' Dwellings Amendment Act Amendment Bill passed through the House of Lords.

Water-Rates.—On Tuesday, March 16, in the House of Lords, Lord Camperdown directed attention to the present position of the metropolitan ratepayers in relation to the water companies. He complained that there was no means of preventing the companies from levying higher rates upon consumers of water relative to the value of property without at the same time providing for an improvement in the quality and method of supplying it. As a new valuation is now being made, the ratepayers would either

have to pay increased rates to the companies, or, in case of purchase, would have to compensate the companies for the assumed power to raise the charges relative to such increase in value. The promoters of the Valuation Act of 1869 did not intend that the companies should benefit by such information. Lord Beauchamp replied that the companies raised their rates upon the authority of their own Acts of Parliament, and not upon the Valuation Act, though this Act undoubtedly enabled them to prove the fact of an actual increase in the value of house property. He did not see at present any plan by which the ratepayers could escape the liability to pay increased water-rates.

The Water Bill.—In the House of Commons, Mr. Cross, in reply to Mr. Jenkins, said that if the Government remained in office they would certainly deem it their duty to deal with the question of a sufficient supply of pure water for the metropolis. They hoped to be able to lay before the House such a scheme as would be likely to command the confidence of all interests concerned.

ON THE THERAPEUTICS OF ACUTE RHEUMATISM.(a)

(*Concluded from page 274.*)

The third group of cases consists of vigorous subjects having, in a considerable portion of them, an inherited tendency. According to my experience, cases of this type are adapted to the action of salicylic acid, and are often relieved with remarkable promptitude by means of it. Salicin is probably nearly as effective, but it must needs be given in such quantity as to be difficult to manage. Scruple doses of salicylic acid seem to be sufficient for most cases of rheumatism, provided they are often enough repeated. The patient should receive not less than two drachms every twenty-four hours, and considerably more may be required. I have found that salicylic acid is more effective if given in solution or contemporaneously with an excess of alkali than if administered in powder by itself. If kept for a few hours in solution with sodium bicarbonate in excess, the solution becomes brownish or greenish-brown, and emits an odour of winter-green. Take it all in all, the most satisfactory procedure is to give wafers containing the salicylic acid, and alternate with an effervescing draught of an alkaline carbonate—the officinal effervescing powder answers the purpose. The amount of relief given by this remedy in many cases is amazing, and in a few hours—a cure being effected not unfrequently in three or for days. When good is being accomplished by it, the evidence is quickly afforded in relief to pain and decline of temperature. If, therefore, after several days' (three or four) persistent and efficient administration of salicylic acid the signs of improvement are wanting, it is probable that nothing will be accomplished by its continued use. If the stomach will not bear it, or if the considerable doses necessary depress the action of the heart, or cause great irregularity in the pulsations, it must be discontinued.

Notwithstanding the importance of these remedies or methods of treatment, there are accessories scarcely inferior in the influence which they exert over the progress of the case. The diet must be carefully regulated. Solid food of any kind seems to be hurtful, and there is usually great repugnance to it. Milk and beef, mutton- or chicken-broth, are the chief components of the diet. Large draughts of milk are useful by maintaining free action of the kidneys. Coffee and tea may be allowed; but wine, beer, and spirits are highly injurious.

Shall any attention be given to the joints? Experience does not justify the local treatment of the rheumatic inflammation. The curative effects of blisters are not due to the notion at one time entertained, of the withdrawal of a morbific material from the affected parts, or to the counter-irritant action, but to their systemic effects in increasing the alkalinity of the blood, and lessening the acidity of the urine, and their power to relieve pain. Wrapping the joints in cotton is comforting to the patient, but it is questionable practice, as the heat is retained, and the temperature of the joints kept above that of the neighbouring parts. The application of alkaline lotions, at one time much used, owing to the theoretical notions then entertained, is now rarely employed. Painting with iodine tincture does not influence the course of the case in any way. To maintain immobility of the affected joints is a measure of the highest utility. Motion increases the pain and swelling, which react in turn on the systemic state, and conversely; an absolutely quiescent state of the joint diminishes pain and lessens fever. To secure the necessary quietude has been attempted by mechanical means—by starch or plaster bandages; but there are many joints so situated that this method, if desirable, would be impracticable. In fact, the desired immobility can be secured only by moral and medicinal means. The necessity for quiet—for absolute quiet—should be impressed on the patient, but moral suasion must be aided by means to quiet pain and restlessness. It is the sedative influence of the bromides on the centres of conscious impressions, and on the reflex and motor centres, which gives them importance as remedies in acute rheumatism, and by some of our best authorities then are assigned the highest place.

Relief to pain and restlessness is best afforded by the agents which exert a curative influence, but if pain persists relief must be given in some other way—by anodynes. If the bromides are active enough to allay pain, to bring sleep, and to quiet the restlessness, they are to be preferred; but it will generally be found, I think, that they do not possess sufficient anodyne power. Morphia or Dover's powder are usually resorted to, but the relief which they afford is at the expense of a protracted convalescence. By checking elimination opium retards improvement. There is an agent which happens to have a decided effect in relieving pain, while at the same time it promotes elimination—that is, atropia; which, for this purpose, was first used and recommended by Dr. Harley. It should be administered hypodermically and in the neighbourhood of the affected joints. The dose for each injection need rarely exceed the one-eightieth of a grain a day.

I have probably occupied sufficient time in giving this summary of the treatment of rheumatism, yet I ought to say something of important complications. It is by no means an unusual circumstance to have endo- or exo-cardial inflammations occur—in probably one-third of all the cases. To combat it, there are three remedies of chief value—morphia, ammonia, and digitalis. As soon as the fact of the cardiac complication having arisen is known, the carbonate of ammonia in solution of the acetate (five grains to a tablespoonful) should be freely given, with the object of securing prompt solution of the fibrinous exudation of deposited fibrin. To check the inflammatory process, and lessen the work of the heart, morphia and digitalis are prescribed. The morphia is most efficient when administered hypodermically, and the digitalis when in the form of infusion. As there is no therapeutical incompatibility, these agents may be given contemporaneously. When the acute symptoms subside, to relieve the immediate and prevent the ulterior bad effects of the inflammation, the tincture of iron and quinia should be given freely, and the heart should be kept steady by digitalis. The extent to which restoration of these injured parts, delicate in structure as they are, can be carried by rightly seconding the efforts of nature, is very surprising. Shall counter-irritants be used? Although we are told that a blister applied to the bony walls of the chest cannot affect the condition of organs within, yet experience is in favour of the practice, and the patient's subjective sensation of relief is more valuable testimony than the deductions of theory. Neither need we be concerned about the blistering point, but put on one, not over the præcordia to interfere with auscultation, but on the side of the chest, in the subaxillary space.

There is a complication of rheumatism—fortunately very rare—in which, without any apparent cause, the temperature suddenly leaps up to 106°, 108°, even 109° Fahr. This state of hyperpyrexia, as it is called, is accompanied by delirium, and by cardiac and respiratory disturbances. That the grave symptoms of hyperpyrexia are due to the high temperature is now admitted on all sides, but no adequate explanation has thus far been given of the causes producing it. We only know that in some cases hyperpyrexia comes

(a) From a Clinical Lecture delivered at the Jefferson College Hospital by Roberts Bartholow, M.D., Professor of Therapeutics and Materia Medica in Jefferson Medical College, Philadelphia. (From the *Baltimore Practitioner*, January.)

on, and paralysis of brain and heart quickly ensues if the excess of heat cannot be removed. Until the value of the cold bath had been made known, there existed no means of diminishing the extraordinary heat, and these cases were always fatal. Now, however, the cold bath affords us the means of rescuing some cases from impending death. The method of the application is the same as for fevers, but if the bath is not available, the wet-pack is a resource which can always be utilised.

FROM ABROAD.

Puerperal Malarial Fever.

Professor Fordyce Barker, in a paper read at the Medical Society of the County of New York (*New York Med. Record*, February 7) treated of an affection which, although it has not been noticed in medical works under such name, he thinks may be properly called "Puerperal Malarial Fever," this title being accurately descriptive of the etiology, pathology, and clinical phenomena of a class of diseases which of late years has been frequently met with in New York and its vicinity. He has the records of seventeen cases.

Puerperal malarial fever may make its invasion at any period following parturition until the physiological changes which constitute puerperal convalescence have been completed. The earliest appearance of it occurred twenty-four hours after an entirely normal labour; while the latest invasion was observed, also after a labour which had been entirely natural, when convalescence had become so complete that only weekly visits were being paid to the patient. The most prominent symptoms are chills, sometimes very slight; a temperature higher by one or two degrees, frequently, than is found at the beginning of any other puerperal disease; rapid pulse; and greater prostration than is usual in other diseases at this period. After such an explosion there is a remarkable remission on the following day, but the alarming symptoms return after one, two, or three days, although usually with less severity. Only typical cases presented such a succession of phenomena. In the majority of cases, the patient, three or four days after the explosion, finds herself suffering from a general sense of malaise, more or less pain in the back, head, and bones, thirst, loss of appetite, and insomnia; and when the disease is developed the chills are less severe, the pulse less rapid, the temperature lower, and the remissions less marked, the disease being in such cases more persistent, and responding less readily to treatment. A fall of temperature of three or four degrees is always attended with a corresponding decline of the other symptoms, which is not the fact with septicæmia, this latter also being rarely accompanied by pain in the head, back, and limbs. Ordinary puerperal fever usually appears between the first and third day after delivery, and very rarely after the fifth day, while the chills are not recurrent, nor are there marked remissions. Malarial fever may be developed during the progress of any of the local phlegmasiæ, or may be complicated by them; and in five of the cases secondary hæmorrhage occurred after the twelfth day, apparently as the result of the malarial fever. In four of the cases seen in consultation the patient was supposed to have puerperal mania. Only one of the seventeen cases terminated fatally, the patient dying on the forty-seventh day after confinement. The treatment required is that applicable to malarial fever; and Dr. Barker has found that Warburg's tincture is a far more effectual and speedy remedy than the largest doses of quinia. He gives half-ounce doses every four hours until the fever is entirely abated, continuing it in gradually diminishing doses until convalescence is perfectly established. On the least threatening of a recurrence a full dose should at once be administered. The tolerance of quinia in these cases is very remarkable. One patient received eighty grains hypodermically without any symptom of cinchonism appearing. When given by the mouth the quinia is usually combined with bromide of potassium to prevent or modify cinchonism.

In the discussion which followed, Dr. Hall alluded to a case which he had seen with Dr. Barker, in which the toleration of quinia was most remarkable, no symptoms of cinchonism having been produced by the patient's taking 150 grains during the twenty-four hours. Another point in the case was the use of nitrite of amyl during the excessive prostration following the rigors. It perhaps did not cut short the chill, but the patient's power of endurance seemed to be increased by it, and she was carried over the period of prostration much more satisfactorily than by any other means employed. In another case attended by Dr. Hanks, exhausting hæmorrhage came on on the sixteenth day after delivery, which could be explained by no cause except the influence that had been produced by fever at an earlier part of the puerperal period requiring quinia for its cure. Dr. Jones observed that he had during the last two or three years seen a great deal of malarial fever in puerperal women, and had found some of the cases very persistent and difficult to treat. Living in a malarious district, he is in the habit of giving a dose of quinia the day following confinement; and in cases in which fever does not subside after the exhibition of a full dose, he cleanses out the cavity of the uterus by means of a probe and cotton—a practice which in one or two cases he has found to be the turning-point in the disease. A point not mentioned by Dr. Barker is that septicæmia may occur after the onset of malarial fever, and may be the occasion of elevation of temperature without remission for several days, thus accounting for the fact that quinia does not produce its effect so quickly as it usually does in pure malarial fever. When the elevation of temperature persists in spite of the quinia, although there may be no tenderness of the abdomen, and many of the ordinary symptoms of septicæmia may be wanting, we should cleanse the uterine cavity, and not take it for granted that it is not a case of septicæmia.

Dr. Lusk said that he had not had any experience in cases of the severe form described by Dr. Barker; but ever since Dr. Barnes read his paper before the American Gynæcological Society, drawing attention to the fact that women living in malarious regions were subject to severe attacks of malarial fever immediately after confinement, he had watched such cases with great interest. He thought that in some of Dr. Barker's cases septic symptoms were superadded, and aided in making them exceptionally severe. In the Maternity Hospital, when women had severe chills and high fever followed by profuse perspiration, and which readily yielded to quinine, he always knew that this was only the forerunner of something more serious, and therefore a warning. If these women were not removed, peritonitis and cellulitis began to appear in other cases; and if warning was still not heeded, there came an outbreak of puerperal fever. Dr. A. Smith mentioned that in several of Dr. Barker's cases there was a history of malarial disease before confinement. He also stated that it was the habit of Dr. Barker from January to June to put his patients upon quinine immediately after confinement, and continue it for ten days. At other times of the year he only used it when there was some special indication present. Dr. Gilette observed that the diagnosis between puerperal fever and puerperal malarial fever is in some cases difficult, but it usually could be made from the facies of the patients, the character of the chills, the absence of pain, the temperature and pulse, the purity of the lochial discharges, and the purely functional disturbance of the gastro-intestinal tract, there being no constipation and no great lack of appetite. He believed that the profession do not recognise as they should do the influence which malaria exerts upon puerperal women. Dr. Emmett referred to cases in which there was uterine hæmorrhage, sub-involution, cellulitis, in women who had been living in malarious districts, and which could not be cured except by quinine. He very frequently found enlargement of the uterus, apparently due to nothing but engorgement from obstructed portal circulation: so he could well understand how a woman exposed to malaria before her confinement would be rendered susceptible to puerperal malarial fever.

Powder for the Ulcers of Herpes.—Professor A. Fournier recommends that the ulcerated vesicles of herpes should be washed several times a day with Labarraque's chlorine solution diluted with equal parts of water, and then covered with a pad of wadding charged with a powder composed of subnitrate of bismuth four parts, calomel and oxide of zinc, of each one part. If the eruption is extensive, absolute rest is necessary, and bran baths, together with the internal use of opiates and bromide of potassium, should be administered.—*Union Méd.*, March 6.

NOTICES OF BOOKS, ETC.

Pay Hospitals and Paying Wards throughout the World. Facts in Support of a Re-arrangement of the English System of Medical Relief. By Henry C. Burdett, Honorary Secretary, Home Hospitals Association for Paying Patients; Secretary, Seamen's Hospital Society; late General Superintendent and Registrar of the Queen's Hospital, Birmingham, etc. London: J. and A. Churchill. 1879. Pp. 176.

Mr. Burdett is not a medical man, but he has had considerable experience in the management of hospitals, and he is well known to the medical profession as an advocate of provident dispensaries and cottage hospitals, and as the originator of the home hospitals movement. He has published a well-known, good and useful book on cottage hospitals; and in the work now before us he has endeavoured to give detailed and reliable information about "Pay Hospitals and Paying Wards throughout the World." His object, he tells us, has been "to give facts, and facts only," and it is easy to understand that the task he thus set himself was anything but a light one. "Every fact," he says, "has been carefully weighed and condensed, its accuracy rigidly tested, and its force conserved." We can well believe that the work has occupied his spare time for three years; and the result is highly creditable to his industry and perseverance. His first chapter is introductory, and is devoted to the consideration of the abuse of the out- and in-patient hospital system as existing in England, and the remedies that have been proposed for the out-patient abuse especially. In the seven succeeding chapters Mr. Burdett describes the pay hospitals in France, Switzerland, etc.; in Germany and Austria; in Spain; Italy; Sweden and Norway; America; and in Canada and the Colonies. Chapter IX. treats of pay wards in England and Ireland. In the tenth chapter the "first pay hospital in England"—a sanatorium established by Dr. Southwood Smith in 1840—is spoken of, and the causes of its failure described. In the remaining three chapters the history of the Home Hospitals movement is given, the question of paying ward and pay beds is discussed, and the advisability of the establishment of convalescent hotels is considered. Mr. Burdett is convinced that a system of admitting poor paying patients into the wards of English general hospitals could be perfectly well managed; that its introduction would do away with the financial difficulties that so frequently embarrass the larger general hospitals; and that it would provide the means of giving salaries to the assistant-physicians and surgeons. It is impossible to criticise this conviction here, as we have not space to give the grounds of it; but it appears to be mainly formed on the perfect success of such a system in Sweden, and he considers that "the Swedish system is as capable of ready adoption in London as it has been found to be in Christiania." But he insists—and unquestionably he is right in this—that "to succeed the system must be simultaneously adopted by all the large medical charities. It is of no use one hospital trying the system alone. Such a trial is nearly sure to fail."

We are glad to find that Mr. Burdett is strongly against the Saturday Hospital movement—as at present conducted, at any rate,—and he gives very good reasons for his objections to it. Altogether the book is well worth reading. It contains a mass of interesting and useful information; and, we may observe, Mr. Burdett takes into consideration the opinion of medical men of different grades, and their interests as well as those of the public and the patients.

Letts's Popular Atlas. Part I. Letts, Son, and Co., 53, King William-street, E.C.

Under the title of "Popular Atlas," Messrs. Letts are issuing, at a marvellously low price, a "complete series of maps delineating the whole surface of the globe." Each monthly part contains three large maps, seventeen inches by fourteen inches in size, and printed in colours. The maps are admirably clear and good; the physical characters of the land, its mountains and rivers, are clearly indicated, with the lines of rails or roads, and the position and relative importance of cities, towns, and villages. The depths of ocean are marked by different shades of colouring; the main lines of submarine and overland telegraphic communication are marked out; and on special maps the positions of important lighthouses are indicated. All the maps that we have seen are remarkably well printed and clear, and the price of each monthly part is only sevenpence. The Atlas deserves to become very popular.

The Girl's Own Paper. Conducted by the Editor of the *Leisure Hour*. Weekly numbers 1d.; monthly parts 6d. The *Leisure Hour* Office, 56, Paternoster-row, London.

The publishers of the *Boy's Own Paper* have happily been induced by the remarkable success of that publication to decide on issuing a companion magazine for girls, the first monthly part of which is now before us. Like the boys' paper, it is intended to be to its readers a "counsellor, playmate, guardian, instructor, companion, and friend," so far as that is possible. It contains serial stories, histories of the girlhood of great queens, of female heroism, and of excellent women; instructive papers on home accomplishments, on the arrangement and adornment of rooms, on needlework and the art of making clothes, on cooking, and on ways of "earning one's own living"; articles on "healthy recreations"; a song by Farmer; and a variety of other things, useful or amusing. Several well-known writers are engaged on the paper, and the fact that it is conducted by the Editor of the *Leisure Hour* is the best possible guarantee of continued excellence. It promises to be worthy of the *Boy's Own Paper*, and no higher praise could be given it. We heartily wish it a parallel success.

The Union Jack: Tales for British Boys. Edited by W. H. G. Kingston. London: Griffith and Farran, St. Paul's-churchyard.

The appearance of this magazine is also owing, we imagine, to the stimulus given by the remarkable success of the *Boy's Own Paper*, but it cannot be regarded as in any way a rival of that paper, as it appears to be entirely devoted to serial tales, short stories, sporting adventures, and similar articles. The Editor of the magazine is Mr. W. H. G. Kingston, whose name is dear to boys' hearts; and he has gathered round him a goodly company of co-workers, as Mr. Ascot R. Hope, Mr. R. M. Ballantyne, two or three war correspondents of newspapers, Mr. J. T. W. Bacot, and other known writers. The tales are freely illustrated, and they are pure in tone, though, of course, "stirring," and often more or less sensational.

Prize Questions of the Royal Belgian Academy of Medicine.—1. The history of the diseases of the nervous system, especially epilepsy: April 1, 1880. 2. The material and psychical effects of alcoholism, both on the individual and his descendants: July 15, 1880. 3. A comparative investigation of rickets, osteomalacia, and *cachexie ossifrage* in the domestic animals: May 1, 1881. 4. The nature and influence of innervation on the nutrition of tissues: January 1, 1882. 5. The influence of desiccation, used as a means of conservation, on simple medicinal substances of the vegetable kingdom: February 1, 1882. 6. The influence of animated germs in the etiology of diseases: January 1, 1883.—*Progrès Méd.*, March 6.

Small-pox and Medical Students.—During the present epidemic of small-pox prevailing at Paris, Lyons, and elsewhere in France, some of the medical students have taken the disease and died. Their deaths have been recorded in the medical and other journals as examples of the most devoted heroism, and of course their devotion is much to be admired; but when it is held up for such admiration and imitation by articles in journals and addresses in cemeteries, there is a danger of unnecessary exposure to the disease, which can benefit no one, and does great mischief by being encouraged. We are, therefore, glad to find so influential a man as Prof. Diday, of Lyons (*Lyon Méd.*, February 29), raising his voice and demanding that such deaths as these shall be at once prevented by the hospital administration opposing this generous but unreflecting enthusiasm by issuing an order that no students shall be admitted on duty in the small-pox wards unless provided with a certificate of recent revaccination performed and testified as successful by a doctor of medicine.

REPORTS OF SOCIETIES.

ASSOCIATION OF SURGEONS PRACTISING DENTAL SURGERY.

Wednesday, February 18th, 1880.

W. A. N. Cattlin, F.R.C.S., President, in the Chair.

After the annual address given by the President,

Mr. Hamilton Cartwright opened a discussion "On the Means of Diagnosis afforded by an Examination of the Teeth and Mouth in Doubtful Cases of Constitutional Disease." He desired to show how some knowledge of dental lesions might be of the greatest service to practitioners of medicine and surgery, whilst at the same time the qualified surgeon practising dentistry might give valuable aid to his *confrères* in many dubious cases. The first subject he wished to draw the attention of the Fellows to was that of neuralgia connected more especially with the head and neck, which he divided into supra-orbital, infra-orbital, and facial, mental, and cervico-facial. His contention was that there is no such disease as idiopathic neuralgia; that a cause for it is invariably to be found, whether it be in connexion with the impressions created on the nervous centres by the ovum in the womb, or by the diseased tooth. He then combated the theory that in ordinary cases there is any degeneration of the *posterior* roots of the spinal nerves, proving his hypothesis by many examples of sudden and complete cure on the removal of an exciting cause of pain. Though the teeth were very frequently the originators of a spurious kind of neuralgia, he thought that they were very often unjustly blamed and sacrificed. In speaking of the *loci* of neuralgic pain he hazarded the theory that the symptoms of neuralgia were in no small number of instances owing to pressure on the main branch of a nerve caused by exostosis around the edges of the foramina through which they pass. He then gave the means of diagnosing between pain due to dental causes, and that caused by lesion of the nervous centres or by that of special nerves, maintaining that by process of elimination it was easy to prove whether the teeth were at fault or not. He also alluded to the subject of gout, showing that there was a special condition of the teeth and oral mucous membrane by which the disease might be diagnosed, and even anticipated in hereditary cases. He then entered upon the signs of syphilis seen in the mouth, as those of rickets, phthisis, and dyspepsia, concluding an exhaustive discussion with the signs of scrofula and struma in the glands, laying great stress upon the fact that a lack of knowledge of the elements of dental surgery, such as might be acquired in any general hospital, frequently was the cause of glandular abscesses being treated as scrofulous.

The President thanked Mr. H. Cartwright for the clear and able manner in which he had brought a very interesting subject before the meeting, and quoted several published cases to support Mr. H. Cartwright's theory, that the local cause of facial neuralgia was often to be found in a remote part, and *vice versâ*. He instanced the case published by Sir Charles Bell, in which an ulcer of the duodenum had caused facial neuralgia, and others mentioned in Sir Henry Halford's essays, in which osseous deposit on the crista galli of the ethmoid bone had produced the same effect. Perhaps the most interesting cases he could refer to, of pain in remote parts produced by irritation of the pulp or nerve of a tooth, was one published by the late Mr. Sercombe, in which severe spasm of the uterus was clearly traced by experiment to the exposed pulp of a tooth. He thought facial neuralgia was more frequently to be traced to the gouty diathesis and an anæmic condition of the blood than Mr. H. Cartwright supposed, although cases of neuralgia from constitutional causes were by far the most rare, and Dr. McCulloch had shown that they were common in malarious districts.

Mr. Francis Mason dwelt upon the importance of distinguishing syphilitic from other diseases of the cavity of the mouth, and remarked that the commonest form of secondary eruptions in that cavity was found in a raised whitish patch, somewhat indented from contact with the teeth, and situated inside the cheek near the angles of the mouth on both sides. He believed that in the true syphilitic sore throat such patches were observed either over the tonsils, or extending as crescentic elevations on the soft palate. If the tongue were affected the patches were chiefly on the sides of the organ, and indented from contact with the teeth. He believed that this peculiar raised condition, due to the effusion of lymph, so characteristic of true syphilis, was much more commonly to be observed than the deep excavated ulcer. He further remarked that it was customary at the present day to attribute all cases of exfoliation of the palate and nasal bones to syphilis. His own experience led him to believe that in by far the majority of such cases there was no history of true syphilis.

The President assumed that Mr. Mason attributed necrosis of the bones of the nose and other parts more to the abuse of mercury than to syphilis, although he had not actually said so.

Mr. Mason, in reply to the President, coincided with him that the awful destruction of the bones of the face and soft parts, as occasionally seen in former years, but now, happily, illustrated only in our museums, was due not to syphilis, but most probably to the wholesale administration of mercury for its supposed cure. Lastly he urged the importance of making a correct diagnosis, and instanced some cases in which the mere eruption of a wisdom tooth had been mistaken for syphilitic sore throat, and had been treated accordingly.

Mr. Edgelow considered that neuralgia had always some positive cause, and narrated a case that had come under his notice at St. George's Hospital, in which exostosis of the fang of a tooth had caused severe pain in the hand, which subsided at once on the extraction of the tooth.

Mr. Ranger stated that in two cases which he had recently met with at St. Thomas's the same result followed. The first case was that of a young man who suffered extreme pain in the right arm and down to the hip-joint. He found a lower bicuspid very much decayed, and on destroying the pulp with arsenic the pain ceased almost immediately. The other case was that of hysteria in a girl, when on removing a lower bicuspid, much decayed, the same result followed.

Mr. Hamilton Cartwright briefly replied.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

Friday, February 20.

John Syer Bristowe, M.D., F.R.C.P., President, in the Chair.

The minutes of the last meeting having been read and confirmed, the report of the Council was read on certain subjects which had been referred to them for consideration:—1. The power of vestries or district boards to add ten years in computing the superannuation allowance to retiring officers in accordance with the terms of Section 5 of the Superannuation Act. The Council defer their report to the next meeting. 2. Dr. Cameron's Bill for facilitating animal vaccination. The Council are of opinion that instead of facilitating it would interfere with the successful vaccination of the community. 3. The names of the seven members of the Committee selected to consider the propriety of revising the statistical tables of the Society are as follows:—Drs. Buchanan, Tatham, Tripe, Hill, Stevenson, and Mr. Turner.

Mr. Ernest Hart, Dr. Longstaff, and Mr. Humphries (of the Registrar-General's Office) were proposed as Associates of the Society. Drs. Sedgwick Saunders and Mr. Coates (of Salisbury) were proposed as Members.

With regard to Dr. Corfield's resolution—"That the President of the Local Government Board be requested, either by a deputation from the Society, or by a petition, to introduce a Bill into Parliament with the object of making the appointments to the post of Medical Officer of Health throughout the country permanent,"—a letter had been received, stating that Dr. Corfield had reason to think that the Local Government Board will introduce a Bill to this effect. Letters were also read from Drs. Woodward and Bond remarking upon the obvious importance of medical officers of health being at full liberty to give unpalatable advice to their vestries without being in fear of immediate suspension. Dr. Bond states that Section 191 of the Sanitary Act gives ample powers for this purpose if properly carried out and therefore there is no necessity for a new Act.

It was moved by Dr. Tripe, and seconded by Dr. Baylis—"That the Society of Medical Officers of Health desire to record their high appreciation of Dr. Farr and of his valuable

services in the department of the Registrar-General's Office, and they are of opinion that his able deductions and statistical work have contributed in an eminent degree to the advancement of sanitary science, and therefore entitle him to some special mark of honour and approval. They also wish to express their gratitude to him for his invariable courtesy towards all the medical officers of health."

This resolution was referred to the Council for consideration and report.

Mr. MURPHY made some remarks upon a recent outburst of small-pox in the parish of St. Pancras having been traced to an importation from an adjoining parish. Had he known earlier about it he would have had particular attention given to the due performance of vaccination, which might have nipped the epidemic in the bud. The cases are so quickly removed to the hospital that they are often lost sight of. It is very desirable that the vestries should exchange communications with regard to the prevalence of infectious diseases.

This subject was also referred to the Council.

Mr. MURPHY then commented upon the proposal of the Government to form a "water trust" for the metropolis—two-thirds of the trustees to be provided by the local authorities, and one-third by the Government. He thought it would be far better that candidates should be nominated from the vestries rather than from the boards of guardians, because the vestries are large consumers of water, and have the control of the supplies to public places and wash-houses.

It was referred to the Council to consider the desirability of petitioning the Government in favour of this proposal.

SOME FACTS BEARING ON THE ETIOLOGY OF SUMMER DIARRHŒA.

Dr. G. B. LONGSTAFF then read a paper (illustrated by diagrams) on the above subject, of which the following is an abstract:—Many circumstances may predispose to diarrhœa, such as artificial feeding of infants, eating unripe or overripe fruit, foul air, bad water, high temperature, overcrowding, syphilis, struma. It is not improbable that there exists some special or specific cause, at present unknown, which may possibly produce an outbreak independently of any other cause. This specific cause may be a meteorological condition, a peculiar form of pollution of air or water, some animal or vegetable matter in a state of change, or even a living germ. It must be clearly understood that *fatal* diarrhœa or other disease is alone under our consideration, because the arguments to be brought forward are all derived from the statistics of the causes of death. Where does it kill? When does it kill? Whom does it kill? Since 1870 Dr. Farr's quarterly reports have given the death-rates from diarrhœa during the three months July, August, and September, for —(*a*) the whole of England and Wales; (*b*) the twenty largest English towns; (*c*) fifty other large town districts; (*d*) the country districts. The average summer diarrhœa death-rate of the whole of England and Wales is 2¼ per 1000; while that in the "fifty other towns" of the Registrar-General is 3 per 1000. Nearly 1 per 1000 higher is the death-rate of the "twenty largest towns" of England. The death-rate of all the rest of the country is about 1½ per 1000. This makes it quite evident that diarrhœa is twice as fatal in the summer in the fifty towns, and more than two and a half times as fatal in the twenty towns as it is in the country districts. Therefore, the answer to our first question, "Where does diarrhœa kill?" is, "Mainly in the large towns." Diphtheria shows almost an opposite distribution, being essentially a *rural* disease. When the death-rate of the several towns is investigated very striking differences come to light. The London rate is almost exactly the same as that of the fifty towns. Of the whole seventy towns no less than fifty have a rate higher than the mean of England and Wales, while but four—Dover, Halifax, Swansea, and Merthyr Tydfil—enjoy a lower rate than the average of the "country districts." Density or proximity of population is not the common factor. The geological system upon which a town stands appears to exert no influence. Elevation above the sea does not make much difference. Proximity to the sea is without effect. It is very desirable that the whole of the seventy towns should be classed according to (1) system of excreta disposal; (2) fall and ventilation of sewers; (3) porosity of soil, depth of ground water, and movements of same; (4) character of water-supply; (5) prevalent trades, and especially the employment of women; (6) consumption of alcoholic liquors per head; (7) existence of habit of opium-eating, and the like. The answer to the question, "Where does diarrhœa kill?" may be thus modified, "Mainly in towns, but with some remarkable exceptions." "When does diarrhœa kill?" Taking one year with another, the mortality from diarrhœa is below the mean from the beginning of October to the end of June, while it very greatly exceeds the average during July, August, and September. The commencement of the rise in June and the end of the fall in November are very approximately three weeks after the rise of the mean temperature of the air above 50°, and its fall below the same point. "When does diarrhœa kill?" During six months of the year (December 1 to May 31) the deaths from diarrhœa in London are practically constant, averaging between fourteen and fifteen per week. A fortnight after the temperature exceeds 60° Fahr. (*i.e.*, about July 1), the deaths begin to exceed the mean (in London 52 per week). The greatest number of deaths occur in the first week in August (on the average), whence the numbers fall as they rose. The number of deaths thus appears to be some function of the temperature. In the first, or winter quarter, the death-rate for the "country districts" is identical with that for England and Wales, viz., 0·3 per 1000. That of the twenty towns is somewhat below, that of the fifty towns somewhat above, the mean. Simple or English cholera, as one might expect, exhibits the diarrhœa curve intensified, almost disappearing in winter, and rising (proportionately) to a higher point in summer. Some of the cases are probably due to arsenical poisoning. In general terms it may be stated that diarrhœa is most fatal in years with hot summers, especially if they be at the same time dry, and is least fatal in years with cold summers, especially if they be at the same time wet. The temperature of the water of the Thames has a closer relation to the mortality from diarrhœa than the temperature of the air, but the temperature of 62° Fahr. appears to be more critical than that of 60° Fahr. The number of days on which the mean temperature of the Thames rose to 62° Fahr. or higher forms a good measure of the "pathological heat" of the summer, and corresponds fairly with the diarrhœa curve. Summer diarrhœa is a disease very greatly influenced by temperature, but not caused by heat alone; it is rather a communicable zymotic disease, which thrives best during hot weather. "Whom does diarrhœa kill?" The annual fluctuations in the diarrhœa death-rates at different ages are represented in a similar manner. My "seven ages of man" are as follows:—I. 0-1: Infants under one year; period during which normally all subsistence should be drawn from the mother's breast. II. 1-2: Infants between one and two years; period of transition to a mixed diet. III. 2-5: Young children between two and five years; mixed diet established. IV. 5-15. V. 15-25. VI. 25-55. VII. Over 55. In youth the death-rate from diarrhœa is a vanishing quantity, only 0·04 per 1000 living at that age; during the preceding period the mortality is little greater, and during the prime of life only 0·1 per 1000. During the third period (2-5 years) it is 0·6 per 1000, but during the period of decline it rises to 1·2 per 1000, during the second year of life to 5·1 per 1000, and during the first year to no less than 17 per 1000 living at that age. Summer diarrhœa kills persons at all periods of life, but in much larger numbers at the extremes of life, and in by far the greatest proportion during the first two years after birth. This disease is greatly affected by the warmth or otherwise of the season, and to a less extent and in an inverse manner by its wetness. Bad water and filthy privies are as common or commoner in the country than in the large towns, and are therefore not likely to be the cause of a town disease. Fruit, ripe or unripe, is not extensively eaten by children under one year of age, and therefore could only affect them through the maternal organism—which is possible, though not in a high degree probable. Artificial feeding, which during hot weather would often imply feeding with substances in a state of incipient fermentation, would not account for the deaths in adults or old people, nor in children between the ages of two and five. It is stated on good authority that many children have suffered from summer diarrhœa who have been entirely fed from the breast. There remains then bad air. This may be either a locally-bred miasm from the soil, or sewer air. The exciting cause of summer diarrhœa is intimately connected with the process of putrefaction. In a large proportion of the cases the infective material has its source in the public sewers, and is

introduced into the system through the lungs. Further observations are much needed on the following points:—1. What proportion of children under one year of age fed from the mother's breast alone suffer from the disease, compared with those fed artificially? 2. In such cases did the mother suffer from diarrhœa, or any members of the family? 3. The sequence of cases in families.

In the debate following the reading of the paper,

Dr. Tripe said that in some observations he had made upon the prevalence of diarrhœa he found that there was considerable variation in the relative proportion of males to females at the different towns—*e.g.*, for every 100 males attacked at Leicester there were 84 females, at Manchester 88, and at Liverpool 91·8 females to 100 males. No doubt the excessive mortality at Leicester was due to some special local cause. In a survey of the mortality statistics of the Continent, it has been shown that females die in less proportion than males for all diseases, with one or two exceptions. He did not think it fair to take a statement upon the mortality of Leicester as in any way relative to the mortality in other towns. Food does not exert that influence over the sanitary statistics as is generally supposed. What is the cause of the excessive mortality in Leicester? If we take the exceptional years, and see what the atmospheric conditions of the air during these years were, we find that since 1870 the mean temperature has been very even as compared with previous years.

The President did not consider he was in a position to discuss the paper at present. He complimented the author upon the labour which he had expended in calculating out the averages and in the construction of the tables.

Mr. Corner thought that if a town presented generally a high standard of health it would be found that with the prevalence of high temperature there would be a decidedly less average mortality than in unhealthy towns. In this way he thought we might find a method for curtailing the excessive mortality from diarrhœa.

Mr. Longstaff replied that a mere depreciation of the health averages of a town will hardly account for a sudden and excessive mortality from diarrhœa, for Leicester does not stand very low in respect of general mortality. He considers that children under one year frequently die of the disease, while older persons, who also suffer in large numbers, ecover to a great extent.

PATHOLOGICAL SOCIETY.

Tuesday, March 2.

Jonathan Hutchinson, F.R.C.S., President, in the Chair.

The President announced that, by direction of the Council of the Society, there was being prepared a list of such subjects as appeared to be most in want of elucidation and illustration by means of specimens, etc. The list would be a guide to the younger members in selecting specimens for exhibition, but it should be clearly understood that there was no intention to restrict the exhibition of specimens to such as were directly called for in the proposed list. He asked members who had any suggestions to make in regard to subjects they thought it desirable to include in the list to be good enough to communicate with the Secretaries of the Society.

Pulsating Tumours of Cranium, etc.

Mr. H. Morris exhibited a tumour of the cranium, taken from a woman, aged forty, who first came under his care in 1874. She had had a fall on her head two years previously, followed at once by the appearance of a small (blood) tumour, which disappeared in a day or two. But a month later a small hard swelling began to be noticed on the left parietal bone. This in 1873 had become as large as a small apple, and another similar tumour appeared in its neighbourhood and united with the first. When she came under his notice there was a distinct, pulsating, soft tumour fixed to the skull, with a hard margin of bone round its circumference. It extended to the middle line at the vertex, and forwards to the limit of the hairy scalp; the skin was freely movable over it, and presented prominent veins. There was no attempt at ulceration; pressure caused no tenderness. The cervical glands were not enlarged. There was severe headache, with occasional flashes of light, but the eyes were normal. The tumour was punctured with a needle; a little blood was all that came away. Another similar expansile tumour was, in the same month (August, 1874), discovered at the sternal end of the right clavicle. The radial pulses were equal, but a systolic murmur was heard at both the apex of the heart and its base, especially at the second right cartilage; there was no increase of cardiac dulness. The tumours increased in size gradually but slowly, and in 1878 another soft, pulsating tumour had appeared at the upper part of the right thigh, feeling as if produced by an expansion of the upper end of the femur. Soon after, another pulsatile tumour was noticed in the left hip. The patient died of bronchitis in October, 1878, all the tumours having become painful before death. Post-mortem, a fifth tumour was found over the inner condyle of the right femur, the bloodvessels of the neck were found to be enlarged, and the heart was hypertrophied but free from valvular disease. The kidneys were healthy. The tumour over the parietal bone was found to be limited by the pericranium externally, and by the dura mater internally. It had evidently sprung from the diploë, and extended thence in both directions, especially outwards. But the parietal bone was perforated for one inch and a half in the centre of the internal aspect of the mass. The tumour mass, starting from the diploë and passing through the osseous perforations, had grown *over*, but not *from*, both the outer and inner tables of the cranium. The brain-substance was flattened by the mass, but there was no sign of inflammation. The tumour in the neck was found to be entirely within the clavicle, the sterno-clavicular joint being not involved. The speaker had thought the specimen worthy of being brought forward on account of the very protracted duration of the disease, on account of the associated cardiac hypertrophy, and also on account of the very peculiar microscopic characters of the tumour. It had been examined by several competent histologists, whose opinions differed very much as to the nature of the growth. He asked that the specimen should be referred to the Morbid Growths Committee for further examination.

Dr. Bristowe cited the case of a woman, between thirty and forty years of age, who had come under his care, complaining of debility and shortness of breath. There was found in the region of the right scapula a tumour which felt like a mass of worms, as if composed of a congeries of bloodvessels. A similar growth was discovered in each buttock. Over each of the growths a systolic murmur was audible. Post-mortem, these growths were found to be sarcomatous.

Dr. Thin had examined sections of the tumour exhibited by Mr. Morris. His conclusion was that the tumour was cartilaginous in nature. It consisted of a firm matrix, containing many cavities lined by cells; and it was on account of the different views taken as to the nature of these cells that there was so great difficulty in saying what the nature of the tumour really was. Thus Dr. Hamilton, of Edinburgh, who had also examined sections of the tumour, thought these cells were epithelial; but the speaker had hesitation in agreeing with that view, for if they were epithelial the tumour must be glandular in nature, whereas there was no glandular tissue in the diploë of the skull, and the tumour itself had none of the ordinary characters of growths originating in the sweat or sebaceous follicles. Dr. Thin traced what he believed to be formation of the cavities seen in the matrix of the tumour mass. In the first place there were large globular cells with distinct nuclei, there then occurred a division of the body of the cell into smaller cylindrical cells, the nucleus disappearing, and cavities lined by a single layer of hexagonal or polygonal cells were ultimately formed. The matrix was very firm; it could be readily stained with logwood, and not with carmine—in this respect agreeing with cartilage, and not with fibrous tissue. The question was, whether the presence of such cavities and cells was a sufficient reason to exclude the view that the tumour was of a cartilaginous nature.

Mr. Knowsley Thornton believed the tumour to be cystic, the cysts originating from single cells, as Dr. Thin had shown. The speaker thought that the lining cells spoken of were evidently secreting *epithelial* cells; and the fact that in some places there were long tubular prolongations strengthened this view.

Mr. R. W. Parker had examined the tumour, and thought it glandular in nature. He had examined several glandular tumours of the scalp which exhibited a somewhat similar structure.

Mr. Morris, in reply, stated [that the tumour had been

pronounced by some of his friends who had examined it to be a myxoma, by others to be a cystic enchondroma, by others to be glandular, and by others to be a sarcoma or angeioma. The tumour was referred to the Morbid Growths Committee.

The Degeneration and Regeneration of the Axis-Cylinder and Nerve-Fibres in Non-Traumatic Lesions.

Dr. Hoggan exhibited several microscopic specimens and drawings illustrative of this subject. He remarked that previous research in this direction had been confined to the results of experimental lesions in the lower animals, and that these, on account of the accompanying irritation of the nerve, presented very different results from what takes place in non-traumatic lesions in men. The speaker had studied this subject in connexion with gangrene of the leg, and he found that the axis-cylinder might either break half an inch above the line of demarcation, or might extend downwards into the gangrenous tissue, and there terminate distinctly as itself a gangrenous element. In the former event the two ends of the broken axis-cylinder retract like a spiral, and may leave an interval of several inter-annular segments between the spiral terminations. The retraction is gradual, and the spiral on the central side is particularly large, as if it there formed a reserve store for regeneration. The retraction was probably due to contraction of the protoplasm which surrounded the axis-cylinder. In regeneration, the spiral seemed simply to uncoil and cause the axis-cylinder to elongate in the direction of the periphery. The peripheral portion of the broken nerve broke up into fragments which became granular, and finally disintegrated, forming the granular ball whose presence in osmic acid preparations had hitherto puzzled histologists. When the axis-cylinder had not broken, the termination of the nerve became bulbous or swollen, as though from the swelling of some clear material, as of a fluid within a central canal in the axis-cylinder, the outer portion of which became granular. Sometimes, when the gangrene advanced so as to involve the spiral ending of a previously ruptured axis-cylinder, the spiral ending might take on the bulbous form, thus forming a connecting link between the two forms of axis-cylinder degeneration described. He found, moreover, that an axis-cylinder might undergo morbid degeneration within healthy interannular segments without throwing these into the characteristic embryonic degeneration, proving that the axis-cylinder had no biological connexion with the segments within which it might lie. The fact that the fragments of axis-cylinder, when broken off from their central connexion, underwent the morbid degeneration described, while in similar circumstances the elements of interannular segments around them underwent the embryonic degeneration of inflammation, was a valuable support to the hypothesis of Remak and Ranvier that the axis-cylinder came direct from, and was in complete connexion with, the nerve-cell in the nerve-centre; and it disposed of the hypothesis of Engelmann that the axis-cylinder, like the interannular segments within which it lay, was composed of independent entities.

The Fungus of Tropical Ringworm.

Dr. Thin exhibited microscopical specimens of the fungus found in tropical ringworm, which he thought quite different from the fungus of ordinary tinea circinata. "Tropical ringworm" was used as indicating the disease designated by Hebra "eczema marginatum," which usually appeared in patches in the neighbourhood of the genital organs. But this affection had been generally regarded as ordinary ringworm, modified by the position in which it occurred. But Dr. Manson, of Amoy, who had seen many cases of this tropical ringworm, had found that the fungus of the latter was quite distinct from that found in tinea circinata. Not only were the two varieties of fungi unlike in appearance, but Dr. Manson had also found, by repeated inoculations of both diseases, that each always bred true and remained distinct from the other. The mycelium of the tropical ringworm varied very much in size, that of tinea circinata being fairly uniform. Moreover, the tropical disease was very chronic and difficult to cure. Though it might disappear for a time, it was very liable to break out again, especially in those who returned to tropical climates. Dr. Manson had named the affection *tinea imbricata*. The disease was particularly common in the regions near the Straits of Malacca.

Dr. Bristowe remarked that the mere obstinacy of the disease was not diagnostic, for ordinary tinea circinata was sometimes very chronic. Thus he had lately seen a lady suffering from tinea circinata affecting the nails. She had caught the disease seven years previously from children affected with it.

Sir Joseph Fayrer had seen the disease alluded to very frequently in India, where it was common in the damper and hotter parts. It was regarded as a form of tinea circinata modified by the heat and moisture of the parts of the skin specially affected by it. It was rapidly and effectually cured by the application of Goa powder and a change of residence.

The President criticised the term "tropical ringworm," for ordinary ringworm occurred in the tropics. The genitals might also be attacked by ordinary ringworm. But he did not mean to imply that the affection described by Dr. Thin was identical with tinea circinata.

Dr. Thin, in reply, said he had used the term "tropical ringworm" because that name was already in use, and on account of his reluctance to add another term to the over-burdened terminology of skin diseases. He agreed thus far with Sir Joseph Fayrer, that the disease would seem to disappear very readily under proper treatment; but the disappearance was only temporary, and it was most difficult to eradicate completely. It might attack other parts of the skin than those about the genitals. It never destroyed in any way the hair of the parts attacked. In this respect, again, it differed from ordinary ringworm.

Primary Cancer of the Liver.

Dr. Pye-Smith exhibited a liver taken from a boy fourteen years of age. Two years before death he fell on his right side, and soon after that he came under the speaker's care, with pain in the region of the liver, which was found to extend some inches below the costal cartilages, and gave a semi-fluctuating sensation on examination. The speaker thought then that the enlargement was due to a hydatid tumour, but a puncture did not confirm the diagnosis. The swelling continued, presenting still the semi-fluctuating character, and it was again tapped not long before death; but, as before, nothing but a little blood escaped. There were no other symptoms until a few days before death, when the temperature rose to 104° Fahr., and the patient became deeply jaundiced. Post-mortem, the liver weighed 200 ounces, and was everywhere infiltrated with soft yellowish cancerous material, which grew into the large veins in fungus-like masses. Cancer was found nowhere else in the body with the exception of a small secondary nodule in one lung. The growth must therefore have been primary in the liver. The microscopic appearances of of the growth showed it to be a true carcinoma, many nucleated epithelial cells, packed in alveoli, being seen. It was an example of a malignant adenoma. This form of growth often presents close resemblances to normal liver-structure, only that the cells are much more numerous and are packed together very irregularly. The chief points of interest about the case were—the extreme rarity of primary cancer of the liver beginning in the acini, and not in the ducts; the youth of the patient; the length of time during which there were no grave symptoms; and, lastly, the high temperature just before death, the cause of which the necropsy left unexplained.

Hypertrophy of the Masseter and Temporal Muscles.

Dr. Wickham Legg exhibited a young girl showing this condition. No other muscles were either hypertrophied or atrophied, or had their power impaired, and the enlarged muscles were of good tone, and responded well to faradism, and not to galvanism. Enlargement of the masseters sometimes took place in the later stages of pseudo-hypertrophic paralysis, but never, so far as he knew, in the early stages. He would watch the case with care. In regard to the heredity of pseudo-hypertrophic paralysis, the speaker remarked that boys were more liable to inherit the disease than the girls of a family, and the latter, though not affected themselves, often transmitted it to their male children. A similar law was found to hold good in hereditary hæmophilia, in hereditary colour-blindness, and also, though to a less extent, in gout.

Sclerema Neonatorum.

Dr. Stevenson exhibited the body of a child, aged ten weeks the subcutaneous adipose tissue of which was everywhere very hard, so that the body looked and felt as if it were frozen., He had not seen the child during life, and could not say for certain whether the condition had been then observed to be present. The parts where fat was absent were quite soft and

flaccid. The internal organs were all fairly healthy. The condition was supposed to be due to a substitution of palmitin for olein in the fat, which thus became solid at a much higher temperature than in the case of ordinary fat.

Dr. Barlow had seen one case in which the same condition was congenital—in a still-born child,—and in another case the condition was developed when the child was seven weeks old. There was another distinct variety of the affection, characterised by the appearance at an early stage of bluish-red patches. This variety had been alluded to chiefly by French writers. It usually occurred in children four or five years old; he had seen one case. But in this variety the fat was not firm and solid, as in the variety illustrated by Dr. Stevenson's specimen, but, on the contrary, as Dr. West had described it, was infiltrated with reddish serum which could be squeezed out from it. He thought these two varieties ought to be distinctly differentiated.

Dr. N. Moore thought the cases occurring in quite young infants were different from those of older children. The former, in his experience, were usually attended by marasmus, while the latter were not.

The President stated that the patients were usually very ill at the onset of the disease. The patient might die at that stage from the severity of the general symptoms; but this extreme illness usually passed off.

Fresh Specimen of Cancer of the Stomach.

Mr. Barrow exhibited this specimen, taken from a gentleman who had suffered from general wasting and loss of appetite for two years before death, and who died of exhaustion. The stomach was much thickened and was adherent to the surrounding organs. The neighbouring lymphatic glands were large and hard. The growth was found by the microscope to be of an alveolar structure with large cells, some of which had undergone colloid degeneration.

The following specimens were exhibited by card:—

By Mr. Walsham—Pedunculated Fatty Tumour growing from the Anterior Superior Spine of the Ilium.

By Mr. Furneaux Jordan—Abscess of the Head of the Tibia.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, March 3.

W. S. Playfair, M.D., F.R.C.P., President, in the Chair.

Double Monster.

Dr. Godson showed for Dr. Yarrow a double monster, the labour having been attended, in the first instance, by a midwife attached to the City of London Lying-in Hospital. The heads were separate; the spinal columns converged, but were distinct throughout; the sternum was single; the heart fused into one, and resembling in type the heart of fishes. A description of the dissection by Mr. Eve was appended.

Dr. Yarrow described the mode of delivery. The first head was delivered by forceps, and progress was then arrested. The right arm was released by the fingers, and the second head then discovered. It was extracted by the vectis, used as a lever, aided by considerable pulling.

Mr. Eve thought that the arrest of development of the right heart was due entirely to mechanical causes—viz., to tension,—the right heart being further than usual from the right head.

Pelvic Viscera showing Congenital Communication between the Rectum and the Genito-Urinary Tract.

Mr. Alban Doran showed two specimens of this condition. The first was from a male infant who died at the age of six months, and had passed meconium by the urethra, the anus being absent. The channel entered the urethra just below the sinus pocularis, and admitted a No. 4 bougie. The second case was that of a girl fourteen years old. She was admitted into the Samaritan Hospital, under Dr. Wynn Williams, for obstruction of a common cloaca by a mass of fæces, and was relieved for a time. She died from cellulitis, with pyæmic deposit in the lung, which came on with sudden pain during the administration of an injection by a nurse. The vagina and rectum both opened into the vulva, the orifice of the rectum being half an inch in diameter.

Dr. Aveling thought that some relief might have been obtained by operation in the latter case.

Dr. Rogers said that there was no space to form a proper rectum, since the vagina had been distended into a cloaca filling the pelvis.

Anteflexed Uterus.

Dr. Hayes showed the above specimen, from a woman aged fifty-seven, who had never been pregnant. There was a pinhole os, and a small fibroid as large as a hazel-nut in the posterior wall.

Report on a Specimen of Ruptured Fallopian Tube.

The report by Dr. J. Williams, Dr. Godson, and Dr. Galabin on the specimen of ruptured Fallopian tube shown by Dr. Godson for Mr. Barton was then read. Embryonic cells in the wall of the Fallopian tube, also villi and part of the chorion, were discovered. It was considered that the embryo could not have reached more than one month's development, and that the corpus luteum in the opposite ovary was as much as two or three weeks old. The uterine decidua was almost entirely absent.

Dr. Galabin showed microscopic sections, including the chorion and villi, and also the giant embryonic cells growing from the tube-wall.

Cast of Fœtal Head.

Dr. Roper exhibited the cast of a fœtal head, showing the furrowing in the left temporal region caused by pressure against the promontory of the sacrum in delivering through a narrow conjugate. Podalic version was performed, but the head was arrested notwithstanding strong traction. It was afterwards expelled naturally by six or eight severe pains.

Malignant Disease of the Cervix.

Dr. Roper showed also a specimen of malignant disease of the cervix uteri. The case looked at first suitable for surgical removal, except that a trace of extension up to the body of the uterus was detected. The patient was suddenly attacked by general peritonitis, and died in four days.

(*To be continued.*)

MEDICAL NEWS.

King and Queen's College of Physicians in Ireland.—At the usual monthly examinations for the licences of the College, held on Monday, Tuesday, Wednesday, and Thursday, March 8, 9, 10, and 11, the following candidates were successful:—

For the licence to practise Medicine—

Buggy, Kyran Thomas. | Cox, Charles Hayden.

For the licence to practise Midwifery—

Battersby, John. | Cox, Charles Hayden.
Buggy, Kyran Thomas. | Exham, Arthur Richard F.
Silcock, Alexander.

Since February 6 the following Licentiates have been approved for admission as Members of the College, in accordance with the terms of the Supplemental Charter of December 12, 1878:—

*John Henry Wilson, 1851, Liverpool.
*William Shaw Duckett, 1860, Dublin.
James Brady, 1860, Dublin.
*Denis Ignatius M'Veagh, 1860, Coventry.
*S. Henry O'Brien Banks, 1866, Surg.-Major A.M.D., Bombay.
Charles George Lyster, 1867, Kilkenny.
*John Stone, 1870, Surgeon R.N.
William Stoker, 1873, Dublin.
Joseph Eaton, 1874, Glendalough.
*Raglan Wykeham Barnes, 1875, Netley, Surgeon A.M.D.
Effingham Carroll MacDowel, 1875, Sligo.
*Arthur Alma Johnston, 1875, Bombay.
*Frances Elizabeth Hoggan, 1877, London.

The Licentiates in the foregoing list who have an asterisk placed before their names have taken the prescribed declaration, and have been duly enrolled as Members of the College. The figures placed after the names indicate the year in which the licence of the College was obtained.

Apothecaries' Hall, London.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, March 11:—

Deane, Edwin. Wincanton.
Puddicombe, William Noble, Purcells, Edgware.
Studer, Benjamin, Linthal, Alsace.

The following gentlemen also on the same day passed their Primary Professional Examination:—

Cooper, William Astley, London Hospital.
Harvey, Frederick William, London Hospital.
Head, Philip Dewar, London Hospital.
Williams, William Rees, St. George's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to all new Appointments that take place.

Gabbett, H. S., M.B.—Assistant-Physician to the Royal Hospital for Diseases of the Chest, City-road, London.

Hurt, George, B.A., M.B.—House-Physician to the General Lying-in Hospital, London.

Hutchinson, Jonathan, F.R.C.S.—Consulting-Surgeon to the Royal Hospital for Diseases of the Chest, City-road, London.

Mackenzie, J. A., M.B., C.M.—Medical Officer to the Hospital for Sick Children, Gartside-street, Manchester.

White, W. H., M.A., M.D.—Assistant-Physician to the Royal Hospital for Diseases of the Chest, City-road, London.

NAVAL, MILITARY, &c., APPOINTMENTS.

Admiralty.—The undermentioned gentlemen have been entered as Surgeons in her Majesty's Fleet, with seniority of October 1, 1879:—Gilbert Kirker, M.D., Thomas Desmond Gimlett, William Tait, M.B., Joseph Crowley, M.D., George Henry Seymour, James Bankier, M.D., John Auchinleck M'Mann, B.A., M.B., John Brunt, Maurice Murray Ritchie Mackenzie.

BIRTHS.

Banham.—On March 12, at Mount View, Glossop-road, Sheffield, the wife of H. French Banham, M.A., M.B., of a son.

Domville.—On March 6, at Exeter, the wife of Edward J. Domville, L.R.C.P. Lond. of a son.

Galloway.—On March 6, at Epping, the wife of Arthur W. Galloway, M.R.C.S., L.R.C.P. Lond., of a daughter.

Hoar.—On March 6, at Waltham Cross, Herts, the wife of Charles Hoar, M.B., of a son.

Reid.—On March 10, at 7, Clarence-lawn, Dover, the wife of A. Scott Reid, M.B., 8th Regt. B.N.I., of a daughter.

Scott.—On March 13, at Penge, Surrey, the wife of Walter Scott, M.R.C.S., late Royal Navy, of a daughter.

Wight.—On March 3, at 428, Liverpool-road, the wife of George Wight, M.B., of a son.

MARRIAGES.

Coffin—Coling.—On March 9, at Stow Maries, Essex, R. J. Maitland Coffin, M.R.C.P., of 6, Richmond-gardens, West Kensington, to Harriet Jane, third daughter of the Rev. James Coling, B.A, Rector of Stow Maries.

Evans—Burmester.—On March 11, at Little Oakley, Essex, Samuel Evans, L.R.C.P. Lond, M.R.C.S., of Harwich, to Eleanor Sophia, elder daughter of the Rev. George Burmester, Rector of Little Oakley.

Harris—Grove.—On March 9, at St. Marylebone, Herbert Harris, B.A. Oxon., to Helen, daughter of John Grove, M.D., of Spring Grove, Hampton.

Hind—Denton.—On March 11, at Stockton-on-Tees, Henry Hind, F.R.C.S., to Emily, sixth daughter of the late John P. Denton, J.P., of Norton House, Stockton-on-Tees.

DEATHS.

Davies, Edward, M.R.C.S., J.P. for the counties of Glamorgan and Brecknock, at the Court, Merthyr Tydvil, on March 11, in his 78th year.

Goolden, Richard H., M.D. Oxon., F.R.C.P., of 1, Sussex-gardens, Hyde-park, late Physician to H.M.S. *Dreadnought* and St. Thomas Hospital, on March 10, in his 70th year.

Mimpriss, Thomas Roberts, M.R.C.S., at 433, Wandsworth-road, on March 14, in his 85th year.

Williams, Frances Catharine, youngest daughter of C. J. B. Williams, M.D., F.R.S., Physician Extraordinary to the Queen, at Cannes, France, on March 12.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

County and County of the Borough of Carmarthen Infirmary.—House-Surgeon. He must be unmarried, and have a knowledge of the Welsh language, and be registered to practise both in medicine and surgery. He will have the privilege of taking two apprentices, and must agree not to practise in the county of the borough of Carmarthen for a period of five years from the day of his election. Applications, with testimonials, to be sent to the Secretary, Mr. H. Howells, 58, King-street, Carmarthen, on or before March 31.

Salford Union.—Resident Assistant Medical Officer. Candidates must possess medical and surgical qualifications. The election will take place on March 25. Applications, with testimonials, to be sent to Mr. T. H. Bagshaw, Clerk to the Guardians (endorsed "Assistant Medical Officer"), on or before March 22.

Township of Toxteth Park.—Resident Medical Officer. Candidates must be registered, and possess double qualifications. Applications, with testimonials, to be sent to Mr. James Moulding, Clerk to the Guardians (marked "Assistant Medical Officer"), on or before March 24.

University College, London.—Third Assistant-Physician. Applications to be sent to the Secretary, Talfourd Ely, M.A., on or before March 29.

Warwick County Lunatic Asylum.—Junior Assistant Medical Officer. Candidates must not be over twenty-five years of age, unmarried, and qualified in medicine and surgery. Early application, with testimonials, to be made to the Medical Superintendent, The Asylum, Hatton, Warwick.

Western General Dispensary, Marylebone-road, N.W.—Honorary Surgeon. Candidates to be Fellows or Members of the Royal College of Surgeons. Applications, with testimonials, to be sent to the Secretary, Mr. William Kimpton, on or before March 22.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Carlisle Union.—Mr. Moffat has resigned the Dalston District: area 15,520; population 2899; salary £10 per annum.

Chorlton Union.—Mr. R. Fullerton has resigned the Workhouse: salary £120 per annum.

Crediton Union.—Dr. Charles Snape has resigned the Morchard Bishop District: area 13,200; population 2608; salary £52 10s. per annum.

Huddersfield Union.—The Marsden District is vacant by the death of Mr. Joseph Hesslegrave: area 8293; population 2811; salary £18 per annum.

Sunderland Union.—Mr. C. N. Foote has resigned the Workhouse: salary £250 per annum.

Wetherby Union.—Mr. R. L. Elliott has resigned the Harewood District: area 8222; population 1611; salary £15 per annum.

APPOINTMENTS.

Alderbury Union.—Richard Alexander Ross, M.R.C.S. and L.S.A., to the First District.

Drayton Union.—Thos. L. Lloyd, L.R.C.P. Lond., M.R.C.S. Eng., to the Fifth District.

Lincoln Union.—Wm. E. Scott, L.R.C.P. Edin., L.R.C.S. Edin., L.S.A., to the Second and Eleventh Districts.

Norwich Union.—Wm. Woodhouse, M.R.C.S. Eng., L.S.A., to the First District; Charles W. Doyle, M.B. and C.M. Aber., to the Fifth District.

Ware Union.—George Woodward, L.R.C.S. Ire., L.R.C.P. Ire., to the First District.

Royal College of Surgeons.—At an ordinary meeting of the Council on the 11th inst. Mr. James Henry Gramshaw, M.D. St. And. and L.S.A., was elected a Fellow of the College, his diploma of membership bearing date December 2, 1842.

At a recent meeting of the Croydon Board of Guardians a resolution for granting an annuity to Mr. Alfred George Roper, who has resigned the post of Medical Officer to the Union, was considered. Mr. Roper has held this appointment for upwards of thirty years to the entire satisfaction of the authorities, and it was proposed that, in consideration of his long service, an annuity of £100 should be granted to him. After a lengthy discussion, in the course of which every speaker bore testimony to Mr. Roper's exceptional services, the proposition was carried, no one voting against it.

The Thames Valley Drainage and the Sewage Outfalls.—The inquiries relating to the Lower Thames Valley Main Drainage, and the Thames Navigation and the Sewage Outfalls, have been continued, and at present do not appear to be coming to a conclusion. In the former Mr. Nelson appeared for further cross-examination, and was succeeded by Mr. W. Heywood, the engineer to the scheme. The latter gentleman was pressed to admit that the scheme was incomplete in its provisions for getting rid of the effluent and flood waters after their flow had been accelerated by the drainage works executed on the irrigation area. Mr. Heywood admitted that several of the points to which his attention was now directed had not been fully worked out, but contended that it was unnecessary to do so in the case of a provisional order which merely authorised the taking of the land. It was announced that an official communication had been received from the First Commissioner of Works, calling the attention of the Local Government Board to the effect the scheme might have upon Hampton Court Palace, and remonstrating against anything being allowed which might in any way prove injurious to the enjoyment of the Palace as part of the national property. In the Thames Navigation inquiry the taking of evidence is closed, after having occupied twenty-three days, and the proceedings have been again adjourned for a period of three weeks.

THE GLASGOW OPHTHALMIC INSTITUTION. — The annual report, just issued, of the Glasgow Ophthalmic Institution shows that 3683 new cases were under treatment during the past year, of which number 3319 were dispensary patients, while 364 were taken into the hospital for treatment. These figures show an increase of 161 patients as compared with the previous year. One great feature to which the directors particularly wish to call attention is the active interest which the working-classes take in the Institution, as shown by their subscriptions towards its maintenance, no less than 204 workshops having contributed to its funds during the past year, the amount so received constituting nearly two-thirds of the entire ordinary revenue. Some time since the Earl of Stair, patron of the Institution, proposed to raise a sum of £2000 towards a fund for extending the accommodation for patients, and intimated his willingness to subscribe £200 for this purpose, provided nine other subscribers of a like sum could be secured. These nine donors have now been found, and the directors express their appreciation of such liberality; but as the extension of the Institution on an adequate scale will involve an expenditure of at least £4000, subscriptions in aid of this object are still earnestly solicited.

ABSENCE OF SMALL-POX IN THE PARIS GARRISON.— While small-pox is prevailing extensively amidst the civil population of Paris, so as to give rise to seventy or eighty deaths weekly, it is almost absent in the large military force which constitutes the garrison. And this is entirely due to the rigidity with which revaccination is enforced. The *Progrès Médical* (March 6) states that there are not more than twenty cases in the military hospitals, most of them being only examples of slight varioloid, and no deaths having occurred. Every year for some time past revaccination is enforced on the arrival of the contingents; and a great number of men have been revaccinated this year in whom revaccination did not succeed last year. Every revaccination is performed from children's arms, whose parents are paid fifteen francs per sitting. What few cases of small-pox do now occur take place among the officers, or in obstinate or timid men who manage to evade revaccination. The great success which has followed leaving the management of revaccination in the hands of the medical officers, the *Progrès* observes, ought to lead to the same being done for typhoid fever, giving them the power of regulating the lodging of the troops, and advising as to the cleansing of the barracks, which is so urgently required.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

C. J. Egan, King William's Town, South Africa.—Letter and enclosure received.

H. Brady M.—Under the Medical Charities Act of 1851, Ireland was portioned out into 716 dispensary districts, containing 1038 dispensaries, and to those districts 785 medical men were appointed.

M.D., Army.—You will find in the Irish Medical Directory an alphabetical list of medical officers to whom the Victoria Cross for Valour has been awarded. There are ten, of whom six are Fellows and Members of the London College of Surgeons.

A Legal Protection neglected: Milk Adulteration.—Six cases of adulteration of milk were brought before the Marylebone magistrate on one day last week. The Marylebone Vestry prosecuted. The degrees of adulteration varied from 38 to 14 per cent. The defendants were each fined £5, Mr. De Rutzen stating he should make no difference in the cases—adulteration was a fraud—nor between large and small milk-dealers. The defence that the milk was sold as it was bought was no excuse at all. If they did not like to avail themselves of the protection given them by the Act of Parliament, they rendered themselves liable. They could buy the milk with a warranty, and if that were done it would soon put a stop to adulteration.

F. W. Armitage, Tauranga, Auckland, New Zealand.—Letter and enclosure received.

A Lecturer.—There is no objection to a provincial Fellow being a member of the Board of Examiners at the College of Surgeons; in fact, the name of one was submitted with the other candidates at the last meeting of the Council, when Messrs. Bellamy and McCarthy were elected. The following is the list which was submitted on that occasion, viz.: - In Anatomy: Messrs. M. Beck, E. Bellamy, R. Davy, H. G Howse, J. Langton, H. Morris, and E. B. Owen; in Physiology, Messrs. T. H. Bartleet, C. H. Golding-Bird, J. McCarthy, W. Pye, and G. F. Yeo.

A Metropolitan Teacher.—The matter is not yet settled; in fact, it was under consideration at a meeting of the Committee on Examinations in Anatomy and Physiology recently. The following is the "recommendation":—"That a candidate referred at the primary examination for the diploma of member be required, before his admission to re-examination, to produce, in addition to the necessary certificate of three months' extra dissections, a certificate of having attended a further course of Practical Physiology, extending over a period of three months subsequently to the date of his reference."

Winter Garden at Weymouth.—The Mayor has called a meeting to consider the establishment of a winter garden at Weymouth, in consequence of the offer of Sir F. Johnstone, M.P., to subscribe £2000 towards the requisite amount, £4000.

Frugality and Prodigality.—A public water-supply has just been provided for Stourport. The cost will average 15s. per head of the population. The Home Secretary's scheme for the metropolis was equivalent to £3 per head.

J. Ralph P.—The occurrences to which you refer led the Home Secretary to send a circular to mayors and other local authorities, with regard to the due supervision of so-called homes and houses of refuge for children; and he has stated, we believe, that the answers he received induced him to hope that no further legislation would be necessary.

T. V. S., Bucks.—Yes; Mr. Robert Skeffington Lutwidge, her Majesty's Commissioner in Lunacy, was killed in the private lunatic asylum of Drs. Finch and Lush, near Salisbury (a well-conducted lunatic asylum), by an inmate a lunatic. The latter possessed himself of a nail of sufficient length and strength, by which he was enabled to inflict a wound which resulted in death a few days afterwards.

Weather Forecasts.—Sir James Ramsden, of Barrow-in-Furness, has proposed to the Meteorological Council to establish and maintain, at his own cost, a telegraphic reporting station at that place. The Council have accepted this munificent offer. This new station is deemed by the Council an important acquisition.

My Increasing Water-Rate: Why is it?—The London water companies can claim, under their Acts of Parliament, their rates on the full yearly value of the houses. That annual value is assessed every five years by a new assessment under the Metropolis Valuation Act. In all improving neighbourhoods each succeeding revaluation shows an increase.

Glandered Horses.—After some discussion on the statement made by the Chairman of the Wharves Committee at the last meeting of the Kensington Vestry, that in six months no fewer than 116 horses had been slaughtered for glanders in that parish, it was resolved "to refer the matter to the Medical Officer of Health, with the view of bringing the subject before some public body."

Medicus.—The quantity of sulphate of quinine prescribed by the British Pharmacopœia for the preparation of orange quinine wine, and which is necessary to constitute the wine a medicine, that may be sold without a licence, and under certain circumstances without a patent medicine stamp, is one grain per ounce; but samples have been purchased and analysed and found to contain less than this quantity—less, indeed, than half a grain, and in some instances even than one-fourth of a grain.

L. S. D.—According to a statement by Sir James M. Hogg, made in July last, the loss to the metropolitan ratepayers of carrying out "the Artisans' and Labourers' Dwellings Act, 1875," on the fourteen schemes approved by Parliament, was on six of them £562,061, while on the remaining eight it was estimated at £514,409, assuming that the prices received for land equal, and do not exceed, those already offered. By the Amendment Bill of last session provision was taken to remedy the defects of the Act of 1875, and to prevent the public money being in future extravagantly expended.

The Nonconformist Students' Total Abstinence Union.—The report for the past year of this Union, which is composed of the teetotal students connected with the various Nonconformist theological colleges of the metropolis and its vicinity, shows that the number of abstaining students in the colleges associated with the Union had increased, and out of the 317 students 241 were abstainers. At Richmond College, where there were sixty-eight students, sixty-five were teetotalers. The College of Hackney was the next on the list as regarded its proportion of abstaining students.

The Mysterious Deaths, Malton.—The unsatisfactory conclusion of the coroner's inquiry into the deaths of the two young men, which took place at the Larner Inn, between Rosedale and Eyton, on December 16 (to which we have already drawn the attention of our readers), involving, under the mysterious circumstances, an open verdict, has induced the local authorities to apply to the Home Secretary on the subject. The reply recently received from him is to the effect that it may be regarded as, humanly speaking, certain that carbonic oxide gases were generated by the slow combustion of turf in the lower room, and found their way into the small room occupied by the two deceased men in such volume as to produce gradual asphyxia during sleep; that the post-mortem appearances and all the facts point very distinctly to this as the cause of death; and he thinks no renewed investigation of the case could be made with the prospect of any more satisfactory result. At the same time, if there still exists any doubt in the matter, the director of public prosecutions should be applied to for advice.

COMMUNICATIONS have been received from—

The Military Secretary of the India Office; The Honorary Secretary of the Obstetrical Society; The Registrar of Apothecaries' Hall; The Honorary Secretaries of the Society of Medical Officers of Health; Mr. R. Clement Lucas, London; The Secretary of the Association for the Oral Instruction of the Deaf and Dumb; Dr. Octavius Sturges, London; Mr. Simeon Snell, Sheffield; Professor Ogston, Aberdeen; Dr. Wolfe, Glasgow; The Honorary Secretary of the Medico-Chirurgical Society; Mr. J. Chatto, London; Mr. T. M. Stone, London; The Clerk to the Sanitary Authority of Hastings; The Clerk to the Tottenham Local Board of Health; Mr. Watson Cheyne, London; Dr. J. W. Moore, Dublin; Dr. Wm. Read, Boston; Dr. Henry Thompson, London; The Honorary Secretaries of the Medical Society of London; The Directors of the Anthropological Institute of Great Britain and Ireland; The Registrar-General of Edinburgh; Mr. J. I. F. Marshall, York; Mr. W. Bowman, Edinburgh; Dr. Drummond, Newcastle-upon-Tyne.

BOOKS, ETC., RECEIVED—

Report of the Carlisle Dispensary for the Year 1879—Chair of Materia Medica in the University of Glasgow: Testimonials in Favour of James Finlayson, M.D. – On Consumption and its Treatment by the Hypophosphites, by John C. Thorowgood, M.D.—The Famous Victory—Monthly Report of the Health and Meteorology of the Parish of St. Marylebone – Report on the Sanitary Condition of the Whitechapel District for the Quarter ended December 27th, 1879—The Commonwealth of Missouri, by Mr. L. U. Reavis.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Centralblatt für die Medicinischen Wissenschaften—Nature—Revue Médicale—Occasional Notes—North Carolina Medical Journal – Boston Journal of Chemistry—St. Louis Courier of Medicine—Journal de la Bourse—Sanitary Journal—Philadelphia Medical Times—Students' Journal and Hospital Gazette—New York Medical Journal—Anti-Vivisectionist—Revue d'Hygiène—Washington National Board of Health Bulletin – Gazette Hebdomadaire—Louisville Medical News—Gazeta Medica—Canada Lancet—Canadian Journal of Medical Science.

APPOINTMENTS FOR THE WEEK.

March 20. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

Royal Institution, 3 p.m. Mr. G. Saintsbury, "Dryden and his Period."

22. Monday.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. Mr. F. de Havilland Hall, "On a Case of Combined Renal and Hepatic Colic." Mr. Samuel Benson, "On a Case of Genu Valgum Cured by Mechanical Means." Dr. C. R. Drysdale, "On Cerebro-Spinal Syphilis."

23. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Anthropolooical Institute, 8 p.m. Mr. V. Ball, "On Nicobarese Ideographs." Mr. Alfred Taylor, "On a New Method of expressing Degree of Changes of Specific Form in the Organic World, especially referring to the Development of the Mind and Body of Man" (illustrated by numerous Diagrams).

Royal Medical and Chirurgical Society, 8½ p.m. Dr. Pavy, "On the Estimation of Uric Acid by its Reducing Action upon the Ammoniated Cupric Test." After the paper, Sir Henry Thompson will exhibit and demonstrate the "Nietze-Leiten" Endoscope on the living subject.

24. Wednesday.

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Lister), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.; National Orthopædic, Great Portland-street, 10 a.m.

Hunterian Society (London Institution), 8 p.m. Mr. Waren Tay, "On Sterno-Mastoid Tumours." Dr. Little, "On a Rare Form of Wry-Neck, and certain Pathological Changes of the Face resulting from the Deformity."

25. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

26. Friday.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, March 13, 1880.

BIRTHS.

Births of Boys, 1492; Girls, 1356; Total, 2848
Corrected average in the 10 years 1870-79, 2680·6.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	737	705	1442
Average of the ten years 1870-79, corrected to increased population	902·4	863·1	1765·5
Deaths of people aged 80 and upwards ...	...	...	51

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa
West	561359	4	6	6	2	9	...	...	1	3
North ...	751729	6	4	16	2	38	1	4	...	2
Central ...	334369	...	...	3	1	7	...	...	1	...
East	639111	...	2	6	2	19	2	3	1	4
South	967692	3	3	20	6	39	1	5	...	5
Total	3254260	13	15	51	13	112	4	12	3	14

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	30·136 in.
Mean temperature	46·3°
Highest point of thermometer	59·6°
Lowest point of thermometer	33·6°
Mean dew-point temperature	42·7°
General direction of wind	Variable.
Whole amount of rain in the week	0·07 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, March 13, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1880.*	Persons to an Acre. (1880.)	Births Registered during the week ending Mar. 13.	Deaths Registered during the week ending Mar. 13.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3664149	48·6	2848	1442	59·6	33·6	43·3	7·95	0·07	0·18
Brighton	107321	45·6	68	36	58·6	39·4	46·9	8·28	0·20	0·51
Portsmouth ...	134224	29·9	89	40	...	...	...	...	...	...
Norwich	85827	11·5	68	41	58·0	36·2	44·6	7·01	0·04	0·10
Plymouth	74993	53·8	47	45	57·2	39·5	47·8	8·78	0·23	0·58
Bristol	213536	48·0	159	86	60·1	35·2	44·5	6·95	0·24	0·61
Wolverhampton ...	75970	22·4	58	28	51·4	31·3	41·2	5·11	0·04	0·10
Birmingham ...	394738	47·0	328	164	...	...	...	...	...	...
Leicester	129912	40·6	108	61	57·5	34·0	44·9	7·17	0·21	0·53
Nottingham ...	173627	17·4	125	76	59·6	32·0	43·1	6·17	0·25	0·63
Liverpool	544056	104·4	388	235	51·1	33·5	41·8	5·45	0·26	0·66
Manchester ...	363130	84·6	262	180	...	...	...	...	...	...
Salford	185786	35·9	166	80	...	...	...	...	...	...
Oldham	115413	24·7	70	50	...	...	...	...	...	...
Bradford	197196	27·3	109	78	55·1	35·6	42·6	5·90	0·12	0·30
Leeds	318929	14·8	264	132	56·0	35·0	42·9	6·06	0·11	0·28
Sheffield	304938	15·5	211	111	52·0	31·5	41·6	5·34	0·20	0·51
Hull	149627	41·2	126	70	57·0	30·0	41·8	5·45	0·33	0·84
Sunderland ...	116730	42·2	85	55	60·0	37·0	44·3	6·84	0·29	0·74
Newcastle-on-Tyne	149366	27·8	102	60	...	...	...	...	...	...
Edinburgh	229839	54·8	139	79	57·0	32·8	43·0	6·11	0·55	1·40
Glasgow	589598	97·7	340	298	55·0	32·0	43·2	6·23	0·95	2·41
Dublin	314666	31·3	210	220	57·3	30·8	42·3	5·73	0·98	2·49
Total of 23 Towns in United Kingdom	8633571	39·2	6369	3667	60·1	30·0	43·7	6·50	0·30	0·76

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 30·14 in. The lowest reading was 29·90 in. at the beginning of the week, and the highest 30·32 in. on Monday morning.

* The figures for the English and Scottish towns (except for Nottingham, Salford, and Oldham) are the numbers enumerated in April, 1871, raised to the middle of 1880 by the addition of nine years and a quarter's increase, calculated at the rate which prevailed between 1861 and 1871. Revised estimates have been adopted for Nottingham, Salford, and Oldham, based upon special returns of inhabited houses existing within those boroughs. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

THE GULSTONIAN LECTURES.

ON EPILEPSY.

Delivered before the Royal College of Physicians.

By W. R. GOWERS, M.D., F.R.C.P.,
Senior Assistant-Physician to University College Hospital, Physician to the National Hospital for the Paralysed and Epileptic.

Lecture II.

Mr. President and Gentlemen,—The symptoms of the cases of convulsive disease which form the subject of these lectures, the forms of attack, their variations in severity and frequency, the mental and physical condition of the sufferers, and the mutual relation of these and other pathological elements, constitute subjects of much interest. It is useless to attempt in this lecture to traverse the whole of this extensive field, and our survey must be confined to a few points.

One subject which seems worthy of a passing notice is the relative frequency with which fits occur by day or by night, using the terms as synonymous with the sleeping and the waking states. The investigation of this point in 840 cases has yielded the following conclusions:—The attacks occurred only, or almost only, at night in one-fifth (21 per cent.); only, or almost only, by day in rather more than two-fifths (43 per cent.). They occurred by both day and night in rather less than two-fifths (37 per cent.). Fits occurred in the night, partially or only, in rather more than half the cases (57 per cent.); by day, partially or only, in four-fifths of the cases (80 per cent.). In 1 per cent. the attacks occurred only while going to sleep; in one-half per cent. only on waking up out of sleep. In 5 per cent. the attacks occurred only in the early morning. A much larger number had their first attack in the early morning, and many of these patients were in the habit of early rising—a habit which, it thus appears, should be practised with caution by those predisposed to epilepsy. Between the cases of epilepsy and those with hystero-epileptic symptoms, there was no difference in the frequency with which the attacks occurred in the day or in the night. The proportion, for instance, in which the attacks occurred exclusively, or almost exclusively, by night was, of epileptics 21 per cent., and of cases with hystero-epileptic attacks 20 per cent. In epileptics it is somewhat more common for the first fit to occur in the day than in the night; rather more than half commenced in the former, rather less than half in the latter. In hystero-epileptics it is much more common for the first fit to occur in the day than in the night; two-thirds commenced in the day, one-third in the night. Nevertheless, in more than half these cases (56 per cent.) some fits subsequently occurred during the night—that is, during sleep. When the first fit occurred in the day the subsequent fits occurred only in the day in half the cases, only in the night in one-seventh; by both night and day in one-third. When the first fit occurred during the night the subsequent fits occurred only at night in about two-fifths of the cases; by both day and night also in about two-fifths; and by day only in one-sixth.

If we may apply to these proportions the doctrine of probabilities, we may say that if a patient who has his first fit in the day has subsequent fits, the probability is as six to one that some of his attacks will occur in the day; the probabilities are equal that his attacks will, or will not, be confined to the day; and they are equal that he will, or will not, have some attacks in the night; while the probability that he will have attacks only in the night is but one in seven. If a patient who has his first fit in the night has subsequent attacks, the probabilities are equal that these also will occur only by night, and that they will occur both by night and by day, being in each case two in five. The probability is as five to one that they will not be confined to the day—that is, in favour of some fits occurring in the night.

Frequently fits which have recurred for a time in one condition, during sleep, waking, or both, change their time. The conclusions deducible regarding these are as follows:—(1.) When fits which have occurred only by night commence to occur by day, they commonly continue also during the night. (2.) When fits which have occurred only during the day occur during the night, they commonly cease by day. (3.) Attacks which have occurred by day and night often cease to occur in the day and continue at night, but very rarely cease by night and continue by day.

The relation of attacks in women to menstruation is a subject on which various opinions have been expressed. The facts I have to offer are small in extent, the point having been investigated in sufficient detail in only 82 cases. In one-twelfth (7 cases) no attacks occurred at the time of menstruation; in one-third (29 cases) there was no difference at these times; in more than half (46 cases) the attacks were worse at the monthly periods; most frequently they were worse before the period (17 cases); next in frequency they were worse during the period (15 cases), and much less frequently after the period (4 cases). In 10 cases the exacerbation was variable, either before, during, or after; in 2 cases the attacks were worse at the menstruation soon after the patient became subject to fits, but not after the disease had existed for some years. In 2 cases fits never occurred at the periods when menstruation was regular, but they did when it was irregular.

I pass now to the phenomena of the attacks. The fits in idiopathic epilepsy are so rapid in their evolution, and so similar in most cases in their developed characters, the opportunities for watching them are so rare, that mere observation of attacks proved for a long time unproductive of much addition to our knowledge. A new era in the study of epilepsy may be said to have commenced with the investigation, by Dr. Hughlings-Jackson, of the modes of onset of attacks which begin deliberately, combined with that of the subjective sensations by which attacks commence that are less deliberate in their onset. This subject—the study of the modes of onset—is still full of promise to further investigation, and there is, perhaps, no point in the symptoms of a consecutive series of cases to which our attention may be more usefully directed.

I need scarcely remind you that the aura of an attack was formerly regarded as a change in the nerves of the part to which it was referred, exciting the fit, and that it is now known to be merely the impression made upon the consciousness by the commencing action in the brain. The fact that an aura commencing in a limb may be arrested by a ligature around the limb, above the part to which the sensation is referred, was once thought to constitute evidence that the process of the convulsion originated at the periphery. It is now well known that the ligature will arrest a fit which is due to a cerebral tumour, as effectually, and more frequently, than one of any other kind, and of this I have seen many striking instances. The fact that the aura is the result of the commencing change in the brain renders its study of even greater importance than if it originated at the periphery. By its means we gain information, to be obtained in no other way, of the brain function first deranged—that is, of the functional region in which the process of fit begins. In some cases, at least, this may be regarded as the seat of the disease. We learn also something of the form of normal cerebral action, which disease modifies rather than subverts.

The aura of an attack, using the term in its widest meaning, as signifying the subjective commencement, may consist in a consciousness of motion, or of sensation, or in a mental state. It has been long and often maintained by Dr. Hughlings-Jackson, in extension of the older view of Laycock, that the whole brain is made up of structures which subserve sensori-motor processes, and that into such processes all its functions may be resolved. It is unnecessary now to consider this view as a whole, but that every structure of the brain concerned with sensation proper is connected, directly or indirectly, with a part concerned with motion, may be regarded as a proposition scarcely needing proof. A discharge, such as occurs in an epileptic fit, taking place in either of these related structures may lead to a discharge in the other. The two may act so simultaneously that the resulting motion and sensation may occur together. The patient may feel a tingling in his hand at the same moment as the fingers begin to twitch. Or the discharge in one may lead the way to be followed by the other at an interval. The twitching or the tingling may come first. I think that it is of importance to determine, in any given

case, with which the attack commences—the motion or the sensation—*i.e.*, whether the motor or the sensory centre leads in the discharge. By so doing we are able to understand better the association of auræ and their progress. It is necessary, however, carefully to discriminate the form of the sensation, because, as Dr. Jackson has also pointed out, the consciousness may be affected directly by the action of a motor centre, although no movement results. There are motor sensations as well as sensory sensations, and, as we shall see, a fit may begin by a sense of motion before any actual movement occurs. The word "sensation," however, will here be used, when unqualified, to signify a sensation proper, such as numbness, tingling, and the like.

In what proportion of cases is consciousness lost so early that the commencement of the fit is unfelt? Of 1000 cases, in which the presence or absence of a warning was noted, it was always absent in 495, while some aura existed—at least, occasionally—in 505. Thus, roughly speaking, loss of consciousness precedes, or accompanies, the first symptoms in half the cases; in the other half the patient is aware of the commencement of the attack. We may consider what facts regarding the modes of onset these 505 cases supply.

The sensation or motion with which the attacks commence may be referred to almost any part of the body, limbs, head, trunk, organs of special sense, and to many viscera. We must therefore infer that the process of the fit may commence in any part of the brain in which these various parts are represented. We may, for the present purpose, classify most of the auræ or modes of onset into seven groups:—1. The unilateral auræ, a motion or sensation in one side of the tongue, face, trunk, in one arm or one leg. 2. Certain general auræ; bilateral sensations in the limbs, tremors, starts, malaise, faintness, etc. 3. Auræ referred to certain organs, mainly to those to which the pneumogastric nerve is distributed; and to this group belong most of the visceral warnings. The most common is the well-known epigastric sensation; and others are a feeling of choking, dyspnœa, nausea, and cardiac sensations. 4. Vertigo and other allied sensations. 5. Certain sensations in the head; pain, etc. 6. Psychical auræ, the consciousness of an emotion or an idea. 7. Special-sense warnings; some of these are strictly unilateral, but it is convenient to consider them together. This classification is clinical, and as such is adopted as affording facilities for the determination of facts apart from theories.

We may take first the unilateral peripheral auræ, present in 86 cases, or 17 per cent. of those with warnings. Of these the commencement was in the arm in more than half (45 cases), in the leg and face in smaller and nearly equal numbers (15 and 17 cases), in the tongue in 5, and in the side of the trunk in only 2 cases. Such unilateral commencement is common in seizures due to organic brain disease, and the organic disease causing them is usually on the surface of the brain, in the region stimulation of which causes movements in the parts first affected in the fit. Such stimulation, indeed, as Ferrier has shown, may cause convulsions beginning in the part. But from the series of cases now under consideration all those presenting symptoms suggestive of organic brain disease were excluded.

In 5 cases only the aura was referred first to the tongue; in 2 others the tongue was affected secondarily. In 1 the commencement was by a movement, in 1 by a beating, in the rest there was merely a sensation; in 3 tingling, and in 1 a sensation of something crawling on the tongue. In each case the convulsion was right-sided, and in each case in which the side of the tongue affected was noted, this was also the right side. Hence it seems probable that the sensori-motor processes for the tongue predominate on the left side of the brain—a fact also suggested by the great impairment of the movements of the tongue frequently noticed in right hemiplegia with aphasia. The association of movement of the tongue is twofold—in its use for speech, and in its use in mastication and deglutition. We may trace this double association in the combinations of the aura. Tingling in the tongue was associated in 1 case with twitching in the lips, in another with a lateral movement, or sense of movement, in the jaw. The sensation of something crawling on the tongue in 1 case was followed by a feeling of sickness, then of something rising in the throat, and then by palpitation of the heart.

The seizure commenced in the face in 16 cases, and on one side as frequently as on the other, but much more frequently by a motion than by a sensation. In 8 cases the mouth was drawn to one side, no doubt by the zygomatic muscles. Commencement in the lips was rare. In only 2 cases was there an initial contraction in the orbicularis of the eyelids, and both were associated with a sensation in the hand, and were right-sided.

The cases in which the attacks commenced in the arm were 40 in number. In about three-quarters of the cases the commencement was in the hand. Of those beginning by spasm, twitching, etc., the first motion was, in most instances, either in the hand as a whole (10 cases) or in the arm as a whole (8 cases). In only 1 case was there initial movement in the fingers, and this was clonic spasm in the common flexors. In 14 cases the attack began by a sensation—"numbness," "tingling," "pins and needles," etc.; and in these the commencement was, in most, in a definite part of the hand—the forefinger in 3 cases, never in the thumb, twice in all the fingers, once in the middle finger, once in the palm, twice in the back of the hand, three times in the hand as a whole, and twice at the wrist. It never began higher up the arm. In 5 other cases the sensation with which the fits began was less simple, and in several was certainly a motor sensation. One patient always felt "as if his arm were drawing up," and would beg that it might be held down, although there was no motion in it. The feeling was accompanied by severe pain "as if the arm would break." In another case there was a somewhat similar pain, "as if the arm were withering up." In a third there was a feeling of stiffness, and in a fourth a feeling of twitching in the first three fingers, apparently without movement, and in a fifth there was a sensation in the back of the arm "as if the nerves were being drawn." The attacks, commencing with motion, or with the sensations last described, probably motor, began in the right and left hands in an equal number of cases; but those commencing with a simple sensation began in the left hand twice as frequently as in the right. In three-quarters of the cases consciousness was lost before the seizure had extended beyond the arm. But in 9 cases, after ascending the arm, the aura passed to the head, and in 4 to the mouth. In 2 cases, after passing up the arm to the shoulder, the aura passed down the side to the leg, and down to the foot. In no case, after passing to the head or mouth, did the sensation subsequently pass down the side to the leg; but in 2 cases, in which it passed to the mouth, it afterwards commenced again in the foot, and passed up the leg.

The seizure commenced in the leg in 14 cases, and in 10 of these in the foot. In only 5 did it distinctly begin as a movement, and this began in the toes once only, in the foot as a whole twice. In 1 case the movement, twitching, began in the hip, and passed down the leg. In 5 cases the commencement was by a simple sensation, once in the great toe, once in the sole, once in the dorsum, once in the foot as a whole, and once in the leg as a whole. A motor sensation, without movement, was described in 1 case: the patient suddenly felt as if the leg were bent up under the other, and that he must stretch it out. Of the cases in which the commencement was in the foot, consciousness was lost before the aura had extended beyond the foot in 2 cases; in 6 the aura extended up the leg and thigh; in 3 of these it passed on up the side to the head. In 2 cases, after passing up the side, instead of going to the head it passed down the arm to the hand, and then consciousness was lost. In no case in which it passed up to the head did it afterwards deliberately pass down the arm—just as in the cases in which the aura commenced in the arm, if it ascended to the head, it never afterwards passed down the side. The passage of the discharge to the region in which the head is represented appears to be closely connected with loss of consciousness.(a) In 2 cases the sensation, commencing in the foot, passed up the side, and when it had got to the level of the hand it recommenced there, and then passed up the arm. There are thus two modes in which the arm is involved secondarily to the leg, just as there are two modes in which the leg is involved secondarily to the arm—one extension by continuity, passing from the one limb to the other by the trunk, and passing down the limb secondarily involved; and the other by separate commencement in the extremity of the second limb, and the

(a) In this statement, it must be remembered, cases of idiopathic disease are spoken of. In convulsion from organic disease, usually more deliberate, I have known a sensory aura pass up the arm to the side of the face, and afterwards pass down the side of the trunk to the leg.

passage of the aura up both. It seems probable that in the cases in which it passes from one to the other by continuity through the trunk the discharge in the sensory centre takes the lead, and determines the course of the aura, although it may be closely, even instantly, followed by the motor discharge. The representation in the brain of the cutaneous nerves must be as continuous as the skin in which they are distributed. The passage of the aura by continuity up the arm, down the trunk, and down the leg, or *vice versâ*, is intelligible on this theory, but scarcely on the theory that the discharge in these cases begins in the motor centres. This view is supported by a case lately seen, in which the seizures began with a sensation in the foot, without motion. The sensation passed, as such, up the leg and side, and *down* the arm to the hand, and not until it reached the hand was spasm added; the hand began to twitch, and the movement passed *up* the arm, and then consciousness was lost.

In several cases in which the seizure began in the mouth and face, the aura passed afterwards down the arm first and down the leg afterwards. No aura *beginning* in the tongue, face, or leg was associated with one in the special senses. In 3 cases of attacks commencing in the arm there was a subsequent special-sense aura, but in each of these the seizure in the arm began by a sensation proper, not by a motion. This seems to indicate that, as might be expected, the special-sense centres are connected with the sensory limb-centres, rather than with motor limb-centres. The only case in which a special-sense aura was in any way associated with the lower extremity was one in which the seizures began with a pain in the back of the hand, and this pain, as such, passed up the arm and down the leg. When it reached, still as pain, the middle of the thigh, a flash of light appeared before the eyes. The pain went on down the leg, and when it reached the foot consciousness was lost.

In only 2 cases did the attack commence in the side of the trunk, and in 1 the sensation was described as "burning." In 2 cases a left-sided aura was associated with palpitation of the heart. In one patient, a girl, a singular relation existed. The fits began with a feeling of numbness and beating in the right great toe, which passed up the leg, and when it reached the groin the patient felt a need to micturate. If she could do so the aura ceased; if she could not she suddenly felt as if turning over and over. Then a peculiar psychical condition occurred: she lost consciousness, and passed into a severe epileptic fit. I have met with another case in which micturition sometimes arrested a commencing fit. I have also seen a case in which the act of micturition sometimes brought on a fit. The shiver which, in many children and some adults, normally attends the act, indicates the associated affection of higher motor centres; and these facts suggest that the passage of urine during epileptic fits is not merely the result of loss of consciousness, but is really part of the convulsive action.

The mutual relation of the motor and special-sense centres in the surface of the brain, ascertained by Hitzig and Ferrier, enable us to understand something of the progress of seizures. They do this whether we regard epilepsy as a cortical disease or not, because, from Burdon-Sanderson's researches, the relation is similar in the lower centres. For instance, a fit beginning in the face or tongue, if it involves the limbs, takes the arm before the leg, and we find that the arm centres intervene between those for the face and tongue, near the fissure of Sylvius, and those for the leg in the upper part of the hemisphere. Again, in a fit beginning with twitching of the angle of the mouth, rotation of the head commonly succeeds; and the centre for rotation of the head is situated in front of, and contiguous to, the centre for the action of the zygomatic muscle. But in other cases it is difficult to understand the progress of the aura from the experimental facts. For this there are probably three reasons:—First, we know little of the degree of structural association or separation of these centres, the cerebral sulci, of course, affording no information on the matter; secondly, the centres represent in many cases complex movements, and fits begin usually with simple movements; thirdly, we are entirely ignorant of the mutual relations of the sensory centres for the limbs, which Ferrier's experiments locate on the inner aspect of the temporo-sphenoidal lobe. The facts of many auræ make it probable that these rather than the motor centres lead in the discharge, and determine the course of the commencing fit, and I think that thus the progress and association of many auræ may be explained.

A rare but curious condition sometimes attends the onset of a fit which begins unilaterally—what may be termed the alternation of the aura. In some right-sided convulsions, from left meningeal hæmorrhage, which I once watched, the rotation of the head to the right, which accompanied the fit, was preceded by a rotation to the left, and this itself was preceded by a slight initial rotation to the right—a double alternation. I have obtained very few indications of this phenomenon in idiopathic epilepsy. In one case a left-sided fit was preceded by shaking and trembling of the limbs of the right side; in another case the attacks began with a sensation in some left cranial nerve, followed by a sensation around the right wrist.

The great majority of fits which begin unilaterally are epileptic. Of 76 in which the character of the fit could be ascertained, only 9 (or 12 per cent.) presented hystero-epileptic or co-ordinated symptoms.

I have placed together, in the next group, the bilateral sensations in the limbs and certain general sensations which seem to the patient to be universal. Of the attacks beginning simultaneously in the limbs of both sides, the commencement was in the arms in 11 cases. In 4 it was by a sensation only—numbness, tingling, or pain; in 7, by twitching or cramp, with or without tingling. In most cases the commencement was in the hands as a whole, as might be anticipated from the wide distribution of the discharge. In 12 cases the attacks commenced simultaneously in both legs. In half of these the aura began in the feet, as a tingling, trembling, or creeping sensation. Two of the cases of this group were distinctly due to chronic alcoholism. Auræ referred to the trunk, and not distinctly visceral, are very rare; and the sensation is almost exclusively felt in the back—pain or a sense of trembling in the spine. The frequency with which there are hystero-epileptic convulsions in these cases differs very strikingly according to the seat of the aura. All the cases with a spinal aura were epileptic, and so were almost all those in which the attacks began in both arms, only 1 of 14 having been hystero-epileptic. But of 11 cases in which the aura was referred to the feet, in only 4 could I be certain that the attacks were epileptic; in 3 they were certainly hystero-epileptic, and in 4 their exact character was doubtful.

The other auræ, grouped together as general—tremor, startings, jerkings, malaise, faintness—were described in 51 cases, one-tenth of the whole. General tremor or shivering, present in 13 cases, was associated in 3 with pain in the head. General starts or jerkings, the aura in 10 cases, were never associated with pain in the head. In several of the cases the fits occurred during sleep; the patient was awakened by the starts or jerks, and then passed into the fit. General sensations were described as preceding the attacks in 15 cases: a feeling of general illness or malaise, of general powerlessness, of general heat (in 3 cases), of general cold (in 1 case). A sense of faintness, which the patient could not localise, was the aura in 13 cases, and was associated with sweating in 1 case and with giddiness in 3. Almost all the cases commencing with tremor or starting were purely epileptic; whereas among those which commenced by faintness, one-third, and of those commencing by other general sensations, one-half, were hystero-epileptic.

The next group of auræ are those which I have associated as referable to the region of the pneumogastric nerve, including the respiratory part of the spinal accessory. It is not suggested that they have any special relation to this nerve as such. Some of them begin or pass beyond it, but the pneumogastric is the nerve to the organs in which visceral auræ are most frequent, and the majority of these auræ are confined to its functions. These warnings were described in 106 cases.

The commonest form is the so-called "epigastric aura," a sensation referred to the pit of the stomach, present in one-half (51 cases). In a third of these it was actual pain; in half it was a vague, indescribable sensation; in the remainder it was described as a feeling of "burning," of "coldness," of "trembling," of "something there," or of "winding up." In most cases it was referred to the epigastric region generally; in a few it was a little to the left; in none to the right. In 2 it commenced lower in the abdomen; in several it was referred to both the epigastrium and the lower part of the sternum. Whenever the sensation was actual pain, it remained at the epigastrium until consciousness was lost. In many of the cases in which the sensation was vague, it

was described as "rising up through the chest" to the throat or head. The passage to the head was usually followed by immediate loss of consciousness; that to the throat by a sensation of choking. The latter reminds us of the well-known sensation in hysteria, and in many cases of genuine epilepsy the sensation appears to be exactly the same as the globus hystericus. Not only so, but I have seen a case of tumour of the pons in which the epileptiform convulsions commenced with the same sensation, described as a "ball rising up from the stomach to the throat, and stopping the breath."

In 18 cases in which there was no sensation at the epigastrium, the warning was the choking feeling only. In 2 of these there was also coughing. In 7 cases the attacks commenced by some other sensation in the throat. One patient would suddenly exclaim that her throat was sore, grasp it with her hands, and fall in the fit. In 6 cases there was a sensation of dyspnœa or suffocation, referred to the chest and not to the throat. In 5 cases there was some other sensation in the chest, vague in 2, "burning" in 3.

These auræ, felt in or ascending to the chest and throat, appear to be the expression of a disturbance in the sensori-motor processes connected with the respiratory function of the pneumogastric. I need hardly remind you that spasmodic actions form part of the normal action of the respiratory centre as they do of no other, and must be reproduced in higher and associated centres. The epigastric pain, which remains limited to the epigastrium, appears to be related exclusively to the gastric division of the vagus. Accordingly we find that in 14 cases there was described, as part of the aura, another sensation referable to the same function—nausea, evidently such after most careful questioning, and accompanied in several cases by actual retching. In 1 case sudden, intense hunger was described. Other symptoms, often associated with gastric disturbance, accompanied the pneumogastric aura in some cases, as pain in the head and giddiness, the latter especially when there was actual nausea.

Another organ within the innervation of the vagus is the heart, and cardiac sensations constituted the aura in 16 cases, pain in 2, a vague sensation in 3, and palpitation in 11.

Hystero-epileptic attacks occurred in a larger proportion of the cases in this than in any other group—one-fourth. They constituted one-fifth of those with an epigastric aura, or with chest dyspnœa, one-half of those with a throat aura, and one-third of those with a cardiac aura.

The next group comprehends the cases, 90 in number, in which the attacks commenced with a sensation of giddiness, vague or definitely vertiginous, or with the fact of rotation. As a rule, when a sensation merely, the direction could not be ascertained, but of 5 cases the sensation was of turning to the right in 2, and to the left in 3. Of 15 cases with actual rotation, the movement was to the right in 5, and to the left in 10. In nearly all the convulsion was bilateral. In bilateral fits the discharge is never quite equal on the two sides, as proved by the common deviation of the head, and the rotation and vertigo seem to be the expression of this inequality. Almost all the cases were epileptic, one-sixth only being hystero-epileptic. In most consciousness was very early lost.

Sensations referred to the head preceded the fits in 50 cases. In 21 the sensation was actual pain, mostly general or undefined, in a few frontal, in very few vertical or unilateral. It was rarely associated with any other aura. In 29 cases the sensation was other than pain, usually vague, in a few definite—described as "blood rushing to the head," "coldness," "burning," or a dim sense of heaviness or pressure. In some cases it was associated with distinct vertigo, and in others the cephalic sensation itself was closely allied to vertigo. In 1 patient, for instance, the sensation was always described as "two circles within the head moving rapidly in opposite directions, and seeming to get alternately nearer and farther off," until consciousness was lost. In one or two cases a cephalic sensation was associated with an auditory aura, in none with a visual sensation. In one-fourth of the cases with this aura the convulsions were hystero-epileptic, and the proportion was nearly the same whether it was a mere sensation or actual pain. Sudden somnolence preceded the fit in 5 cases, all purely epileptic. Sudden inability to speak constituted the warning in 9 cases, of which 2 were hystero-epileptic.

The aura was psychical in 25 cases, an emotion in 10, an idea in 15. The emotional auræ in all took the form of fear—vague alarm or intense terror. Associations with other auræ were rare, the only combinations being with a sensation in the legs and with pain or other feelings in the head. In no case was it combined with an epigastric sensation. In every case the fits were purely epileptic, although in some they were slight. This is remarkable, since, as we shall see, manifestations of terror are common in hystero-epileptic attacks. The occurrence of this aura bore no relation to fright as a cause of the attacks. Its comparative rarity may excite surprise. No case was reckoned in which the sensation was not mentioned spontaneously by the patient. In most, perhaps in all, cases with a deliberate onset a natural feeling of alarm is produced by the warning, and if the patient is asked if he has a feeling of fear he always replies in the affirmative; but this can evidently not be reckoned as a true emotional aura. Of the 15 cases in which the attacks were preceded by a mental state, in 12 they were purely epileptic, in 3 hystero-epileptic symptoms occurred. In most cases no other description of the aura could be given than that "an idea seems to come into the mind." In 1 case—that just mentioned as commencing by a sensation in the great toe, followed by a desire to micturate and a feeling of turning over and over—this was succeeded by the idea of being in heaven, seeing persons, and hearing a question asked. The subsequent fit was certainly epileptic. Several patients described a feeling analogous to that which Dr. Hughlings-Jackson has designated "voluminous," apparently similar to that said to be experienced during the act of drowning—a sudden recollection of many past events. Another occasional aura was a sense of strangeness—familiar objects suddenly seemed unfamiliar, and then the attack came on. In 1 case whatever was taking place before the patient would suddenly seem to be wrong—*i.e.*, morally wrong—and then he lost consciousness.

The last group of auræ are those referred to the special senses and their organs, which were present in 119 cases. Two-thirds of these (84) were referred to the organ or sense of sight, one-fifth (26) were auditory, 9 olfactory or nasal, and 1 gustatory.

Sensations of smell preceded the fit in 7 cases, all purely epileptic. In most cases the sensation was of an unpleasant smell. One patient described it as a smell like matter; another such as is caused by burning dead bodies; another as like rotten eggs; another compared it to Tonquin beans. The only associations noted were with a visual aura (2 cases) and with a feeling of suffocation (2 cases). A true gustatory aura is among the rarest forms of warning, and was met with in only 1 case. It was described as a taste between sour and bitter, and was referred to the back of the tongue.

The warnings referred to the organs of vision may be divided into five classes: a sensation in the eyeball itself; diplopia; an apparent increase or diminution in the size of objects; loss of sight; distinct visual sensations. A sensation in the eyeball was present in 7 cases, 5 purely epileptic. The eye to which it was referred was in 1 case on the same side as the first motor symptom of the fit; in 1 on the opposite side. It is probable that the centre for common sensation in the eyeball is connected with that for vision. This is suggested by the phenomena of photophobia due to the fifth nerve. In one patient, fits commencing with a pain in the eye were followed by red vision; and in a case of cerebral tumour, presently to be mentioned, a visual sensation and pain in one eye were associated as the aura of the fits. Double vision preceded the attacks in 5 cases. Two were cases of hystero-epilepsy, and the diplopia may have been due to the convergent strabismus so common in hysteroid states. In 2 of the cases, however, the attacks were epileptic. In 1 the diplopia was associated with aching in one eye and an apparent magnification of objects. The apparent increase or diminution in the size of objects is a rare and curious aura. It is apparently connected with increase or diminution in the sensitiveness of the visual centre, which produces the same effect on the consciousness as the stimulation of a larger or smaller area of the retina by a larger or smaller image. Loss of sight preceded loss of consciousness in 26 cases—18 purely epileptic, 4 co-ordinated. It was commonly complete and simultaneous in the two eyes. In 1 case it was said that the sight of the right eye went before the left, followed by rotation of the head to the left. The

loss was preceded by a visual sensation in 2 cases, by an auditory sensation in 1, and in 1 case loss of hearing followed the loss of sight. The only frequent associations were with vertigo in 4 cases, and with rotation of the head in 2.

The aura was a distinct visual sensation in no less than 46 cases (35 epileptic, 3 with hystero-epileptic symptoms, 8 doubtful). The sensation in 9 cases was that of light, not colour—sparks, a ball of light, a flash, or a glare. In 17, colours were seen; and 15 patients were able to give some account of the colours. In 7, only one colour was seen, and this was always either red or blue—the former described five times, the latter twice. No other colour was ever seen alone. Combinations described were—red and blue (twice), red, blue, and purple (once), red, blue, and green (once), red and green (once), blue, green, and yellow (twice), red, blue, and yellow (once). Thus not only were red and blue the only colours seen alone, but they were both present in half the cases in which other colours were seen, and in no case were both absent. Taking the cases together, the order of frequency of the several colours is—red (eleven times), blue (eight times), green (three times), yellow (three times), and purple (once). It is evident that this order does not correspond to the physical relations of colour, as shown, for instance, by their grouping in the spectrum; nor does it correspond in any way to the areas of retinal perception. Red, seen most frequently, has one of the smallest retinal fields; but green, seen much less frequently, has a still smaller field; while the field for yellow, seen as rarely as green, is one of the largest, and is nearly the same as the field for blue, which is one of the colours mentioned most frequently. But the order does correspond, not exactly, but in a very suggestive manner, to the degree of visibility of colours. Cohn(b) found that the order in which spots of colour, one millimetre in diameter, can be seen in direct sunlight at different distances is—beginning with that which can be recognised at the greatest distance—red, next blue and green (equal), next yellow, and least violet. This is evidently not far from the order of development in epilepsy.

In 14 cases the aura was a highly specialised visual sensation, a visual idea. In 2 cases this succeeded a simple visual sensation. One patient, in attacks of *petit mal*, first saw a number of red and white dazzling stars, and then an old woman, and other objects which she could not remember. This is of course rather an attack than an aura. But another patient first saw always bright lights—red, green, yellow, and then, the lights continuing, she saw a girl, and tried to get to her to ask what the lights meant, and then fell in the fit. In the first of these cases the less specialised preceded the more specialised sensation—a sequence to which Dr. Jackson has drawn attention, as suggesting that the more special sensation is the result of the loss of control from the discharge causing the less special sensation. But in the second the more and the less specialised sensations occurred together, and in other cases an equally special sensation, a visual idea, constituted the sole warning of the fit, and must be ascribed to the discharge itself. Two patients had visions of an old woman, and in 3 ugly faces were seen, and in 2 "various people"; in 1 "animals." Two patients described an aura consisting of visions of objects and places familiar long ago, a visual sensation analogous to the psychical aura I have mentioned. In one patient the fits were preceded by a vision of "beautiful places, large rooms," etc.

Associations of the visual aura are comparatively rare. In 3 cases the conjoined aura was in the limbs, and, as already mentioned, in all these the aura in the limb commenced by a sensation. One of these was the case in which a flash was seen as soon as a pain, which commenced in the arm, reached the middle of the thigh. When the visual sensation was unilateral the side in several was the same as that on which the limbs were involved. Thus, in 1 case, some fits commenced with the appearance of a blue star before the left eye, which grew larger and larger until consciousness was lost, and other fits began in the left arm, and others in the left leg. In another patient a bright light referred to the right eye was associated with loss of speech. In these cases the sensation may have been rather referable to one side of both fields of vision than to one eye. Epigastric sensations were associated in 3 cases, and in 3 an auditory sensation. The sensations in one patient were very complex and numerous, and, as I shall have to refer to it again, it may be well to relate the case in some detail. The patient was an intelligent man, twenty-six years of age, and all his attacks began in the same manner. First there was a sensation in the left hypochondriac region "like pain with a cramp"; then, this sensation continuing, a kind of lump seemed to pass up the left side of the chest with a "thump, thump," and when it reached the upper part of the chest it became a "knocking," which was heard as well as felt. The sensation rose up to the left ear, and then was like the "hissing of a railway engine," and this seemed to "work over his head." Then he suddenly and invariably saw before him an old woman in a brown-stuff dress, who offered him something which had the smell of Tonquin beans. The old woman then disappeared, and two great lights came before him—round lights, side by side, which got nearer and nearer with a jerking motion. When the lights appeared the hissing noise ceased, and he felt a choking sensation in the throat, and lost consciousness in the fit, which, from the description, was undoubtedly epileptic. He had also attacks of *petit mal*, which consisted of a vision of a dull-red ball to the right in the lower part of the field. Thus here we have first a pneumogastric (visceral) sensation which becomes intermitting and sound-like as it ascends towards the ear, until it is finally an intermitting hissing, perhaps the least specialised of all the auditory sensations. This is accompanied by a visual sensation of very high specialisation—a visual idea, associated with an olfactory sensation. This gives place to a much less specialised sensation, the two lights; and as the visual centre becomes invaded by this discharge, that in the auditory centre ceases. Finally, the aura terminates with the completion of the pneumogastric sensation—a sense of choking. I shall have to refer to this case again in my next lecture, and will now merely point out that the more specialised visual sensation preceded the less special, and therefore cannot have been due to "loss of control" by preceding discharge; it was evidently due to the discharge itself. The phenomenon of *two* lights before the eyes is one of great rarity among the auræ of epilepsy. Lastly, the association of intermission of the sound with a jerking movement of the light is worth remark. The only autopsy which I believe has been published of a case in which the visual warning existed, is one which I recorded about a year ago. The fits were preceded by a flash of light or pain in the eye, and micropsy, and were due to a tumour in the occipital lobe, which had extended forwards as far as the visual centre in the angular convolution.

To pass to other forms of auditory warnings, noted in 26 cases. In 6 there was an auditory loss, a sudden sense of stillness analogous to the sudden loss of sight already mentioned. In 1 case the two were associated; for a moment all was silent, then all was dark, then consciousness was lost. In a case in which the sensation began in the tongue and passed to the arm and leg, sight was lost after the arm was involved, and hearing after the sensation was felt in the leg. In 1 case some attacks were preceded by an auditory sensation, "singing in the ears," others by an auditory loss.

Auditory sensations preceded the fits in 21 cases. In 4 it was a sensation of an explosion or crash; in other cases the sensations described were the "sound of a drum" (twice), a "whiz" (twice), a "hissing" (twice), a "ringing" (twice), a "rustling," a "rushing sound," and a "sound of thunder." All these may be regarded as the lowest forms of auditory sensation. In 3 cases the sensation was more special—an auditory idea. One patient always heard the words "c-o-n with a con" repeated several times, and then came the fit. In 2 cases music was heard.

The most frequent associations of the auditory aura were with a visual aura (in 7 cases), and an olfactory aura (in 2 cases). In 2 cases it was associated with a sensation beginning in the left hand, and other combinations noted were with auræ beginning in both legs, in both arms, with vertigo, an epigastric sensation, and nausea. In the 3 latter we may trace the normal association of the auditory centre. In several cases in which a visual and auditory aura were combined, the two corresponded in character—*i.e.*, in their degree of specialisation. For instance, one patient described a red light and a rushing sensation like water. The patient who heard the words "c-o-n with a con" saw a girl standing

(b) *British Medical Journal*, October 4, 1879.

by her who was saying them; and a patient who saw "beautiful places, large rooms, etc.," heard at the same time "beautiful music."

The association of the visual and auditory warnings is well explained by the contiguity of their centres as determined by Ferrier. The angular gyrus, in which is the visual centre, is continuous with the superior temporo-sphenoidal convolution, in which is the auditory centre.

I am aware of no published post-mortem of a case in which an auditory aura preceded the fits, but in a case of cerebral tumour of Dr. Hughlings-Jackson's (which I had the opportunity of watching with him for some years, and which he kindly permits me to mention), a sound of bells ringing, referred to the left ear, preceded left-sided fits in an early period of the disease. After death we found a tumour outside the opposite optic thalamus. It was extensive, but had evidently commenced between the thalamus and the upper temporo-sphenoidal convolution.

Dr. Hughlings-Jackson has suggested that the senses are not equally represented on the two sides of the brain, and that the more special the sense the more unequal is its bilateral representation, the more does it preponderate on the right side. The facts of this series of cases give only a partial support to this view. We have seen that attacks commencing by a sensation in the arm began twice as frequently in the left arm as in the right. Nevertheless, all the cases commencing by a sensation in the tongue were right-sided. In none of the cases with an olfactory aura was there any indication of the side which led in the fit. In most of the cases with an auditory aura the sensation was referred to both ears. In 6 cases, however, it was referred to one ear, twice to the right (left side of brain), and four times to the left (right side of brain). But in 10 cases in which visual sensations commenced the fit, in which there were indications of the leading side, there was no difference between the two, in 5 the fits began on the right, and in 5 on the left side, and we must regard the visual as perhaps the most special of all the senses.

Among the other symptoms of the attacks of epilepsy in this series of cases, time permits me to mention only one or two points. The first of these is that pallor of face, although frequent in the early stage of epileptic fits, is also entirely absent in a considerable number of cases. I have watched many attacks, both slight and severe, in which there has been absolutely no change in the appearance of the face until cyanosis came on from interference with respiration.

A typical fit consists of first tonic and then clonic spasm. It has been customary to separate the periods marked by these two forms of spasm, and assign them to different causes. But close observation will show that there is no abrupt transition from one to the other. The clonic spasm is developed by interruptions in the tonic spasm, and these interruptions may be detected by the hand before they are visible to the eye. The clonic spasm is, indeed, only a condition of tetanus in the physiological sense of the word. Slight intermissions probably exist, but are too frequent to be recognised. As they become less frequent they increase in degree, until they become complete. The muscular contractions are thus separated; as the fit ceases they do not become slighter but less frequent, and the last jerk is often as intense as any which preceded it. In partial epileptiform seizures the spasm is usually clonic throughout, and I have seen, in rare instances, tolerably severe attacks in which all the spasm was clonic. The significance of these facts will be considered in the next lecture. There is one class of epileptic attacks in which there is only tonic spasm—general rigidity. They constitute, however, a special group, and are on the side of epilepsy towards hystero-epilepsy.

In the spasm of an epileptic fit flexion predominates slightly over extension, and more in the distal than in the proximal parts of limbs, at least in the arms. The hands are said to be usually tightly clenched. Sometimes this is the case, but a much more common position is with the wrists strongly flexed, and the fingers in the interosseal position; that is, with the metacarpo-phalangeal joints flexed and the others extended, the thumb being within the fingers, and all close together. It is an exaggeration of the posture seen in tetany.

The cases which present co-ordinated spasm as part of the attack, and which may be somewhat loosely grouped together under the name of hystero-epilepsy, are of much interest on account of their practical importance, and on account of the attention which has lately been directed to them. These forms of attack present many variations, and as seen in this country differ somewhat in their character from that which they present abroad. Attacks of these forms have long been described as hysterical. But their severity, their epileptoid aspect, have led to their being designated by such terms as hystero-epilepsy, hysterical epilepsy; and Dr. W. Roberts has lately proposed to call them hysteroid. They have unquestionably close relations with epilepsy. They own for the most part the same causes, near and remote, are, as we shall see, pathologically connected with epilepsy, and, as stated in the first lecture, many of them have almost certainly been included in all published statistics of epilepsy. They have also relations with insanity as well as with hysteria in its simpler forms.

The cases which have come under my notice may be grouped into four classes. The first and most frequent is that which resembles the most closely the description of hysteria major given by Charcot. A patient suddenly falls, apparently unconscious, and, sometimes after a brief period of tonic rigidity, sometimes instantly, presents more or less violent co-ordinated movements, extreme opisthotonos, wild movements of the limbs, which are sometimes jerked quickly, regularly or irregularly, more often thrown about. Often the opisthotonos alternates with simple tonic spasm, in which the arms are stretched out at right angles to the trunk, in the attitude designated by Charcot "crucifiement." The eyes converge strongly, or are rolled up, or directed to one side or the other; they never diverge. Often the paroxysms of violent movement alternate with manifestations of the most intense terror. The eyes are fixed on some imaginary object, as with a look of horror the patient half rises or tries to shrink away. In a moment convulsive movements of frenzied intensity succeed. The head is dashed about with such violence as often to inflict serious bruises, and the back is arched with such rapidity and force as almost to make the patient bound off the bed. Attempts to restrain the movements increase their violence. The more restraint used, the more is needed; and these are the attacks in which the friends of a patient sometimes tell us that "six persons have to sit on him to keep him down." The violent paroxysms often alternate with periods of tranquillity, in which, however, peculiarities in tone and aspect tell those accustomed to these attacks that the fit is not yet over, and presently a fresh paroxysm of terror or furor comes on, and if not cut short by treatment the condition may go on for hours. The end is usually sudden, often with a deep sigh. These attacks vary infinitely in severity and character. When slight they resemble, and are, indeed, identical with, the attacks properly called hysterical. When severe they resemble epileptic mania rather than hysteria, and might be called attacks of compressed mania. In slighter paroxysms the patients may talk wildly. One patient always counted backwards with extreme rapidity. In some cases, especially in children, the patients scream loudly throughout; these are the "screaming fits" of which the friends speak. In severe seizures a curious condition is often observed, which may be called therio-mimicry. The noises and actions of animals are strangely imitated. The patient mews like a cat, or, much more frequently, barks like a dog. This is evidently in part mimetic, although some patients who present the symptom are, in the intervals between the attacks, as far as possible removed from any absurdity. But it seems to be, in part also, the manifestation of some strange animal instinct which we possess in a latent or modified condition, like our canine teeth. A frequent characteristic is the tendency to bite, which may exist apart from any other imitation of animals. It renders the task of attending to these patients in the attacks not wholly devoid of danger. Not only do they bite, but they do so in a curiously animal manner. I have seen a lad of sixteen take the corner of his pillow between his teeth, and shake it exactly as a cat does a mouse, or as the lion shook Livingstone. We are reminded by the barking and biting of some of the symptoms of hydrophobia. One effect of the poison of rabies in man appears to be to develope a condition identical with hystero-epilepsy; and the convulsions of hydrophobia are always more or less co-ordinated in character. Such symptoms as I have described may probably succeed a true epileptic fit. They may also succeed attacks of *petit mal*. But the co-ordinated convulsion may also, as I have seen, commence in

the first moment of the attack. The tonic rigidity, which often initiates these seizures, is different from the condition in a true epileptic fit, although apparently nearly the same as that which Charcot has described as the epileptic stage of these fits.

In women suffering from these attacks I have occasionally found ovarian tenderness, and by ovarian pressure I have often made the patients feel ill, and caused choking sensations in the throat, but I have never succeeded in producing an attack. Nor, of many gentlemen who have practised ovarian compression at the Salpétrière, and tried it on the hystero-epileptics at Queen-square, has anyone, as far as I am aware, been more successful. Now and then I have arrested a fit by ovarian compression, but the arrest has appeared to be due merely to the pain caused, and not to any special influence, and in such cases the attacks could be cut short much more readily by faradisation of the skin. In one of the most severe cases of hystero-epilepsy which I have seen, Dr. Wilson of Surbiton found that at first ovarian compression had no effect; after many repetitions, in different attacks, it did arrest them, but even then less readily than compression at the epigastric region. Another point of difference from the disease as it occurs abroad is that, in the natives of this country, it is never, so far as I have seen, accompanied by any erotic manifestations. Such attacks occur in girls of any age over seven, in women under forty, in boys not at all rarely, and occasionally in adult men. Some of the severest attacks which I have seen have been in men between twenty and thirty-five. They frequently come on during sleep.

In the co-ordinated attacks just described opisthotonos is frequent. A second variety presents, as its predominant characteristic, spasm of the opposite variety, emprosthotonos. The trunk is flexed so that the head and thighs are in contact. This form occurs chiefly in boys, and is usually very uniform in its occurrence, all the attacks being similar. One patient, a woman, whose attacks came on in the night, always woke up from sleep with a sensation of this spasm, although there was in reality merely general tonic rigidity.

A third variety presents co-ordinated spasm in the legs of regular rhythm. During the attack the legs are alternately drawn up and pushed down, the patient being commonly on her back. If on the floor she may be gradually propelled, head foremost, from one side of the room to the other. Several cases which I have seen have presented singular uniformity in the character of the spasm. All were females. Identical convulsive movements in the legs have been observed in hydrophobia.

A fourth variety of attack is characterised by extreme difficulty of breathing, not the rapid breathing sometimes observed in hysterical patients, but intense respiratory spasm. They are the "choking fits" of adults. It is no doubt an extreme degree of the disturbance, which in slighter measure causes the globus hystericus. Since this variety is rare, I may describe briefly an example of it. The patient was a quiet, well-conducted girl. She was unconscious of any warning, but an observer could note a slightly frightened expression and restless movement of the eyes just before an attack; then she would suddenly fall, and instantly begin labouring for breath. If placed on a chair, she could sit up, but the agony of dyspnœa was extreme. Her head was thrown back, her mouth half open, her arms held out before her with fingers separated; the muscles of inspiration were thrown into violent action, and a choking noise in the throat accompanied each laboured breath. From time to time there was an ineffectual attempt to swallow, and she would strike the upper part of the chest with violence, as if trying to shake something down. Her face rapidly became flushed, then dusky, and the dyspnœa increased, until she seemed on the point of suffocation. By closing the mouth and nose, and so producing actual apnœa, the spasm could generally be stopped, but her aspect was wild and she spoke strangely, and in a few minutes passed into another similar paroxysm. Even if placed under the influence of chloroform the dyspnœa returned as the effect of the anæsthetic passed away, and if not stopped by means to be described in the next lecture, such attacks would go on for hours. It is instructive to compare the features of such an attack with the other well-known forms of respiratory spasm—the globus hystericus, the epigastric-throat aura of epilepsy, the paroxysms of laryngismus stridulus, and the respiratory spasm which constitutes so prominent a feature in the symptoms of hydrophobia. The relation which attacks of the co-ordinated class bear to epilepsy and to hysteria is a subject on which various opinions may be, and are, held, and to which I hope to refer briefly in the next lecture, in considering the pathology of these diseases

ORIGINAL COMMUNICATIONS.

THE PATHOLOGIES OF CHOREA IN THEIR APPLICATION.

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(*Concluded from page* 287.)

Morbid anatomy thus failing to explain chorea we are led to regard the affection, for the present at least, as a functional disorder, a mode of muscular misconduct to which all are liable in their several degrees when the proper incentive is applied. Considered in this light chorea is no more to be taken as indicative of gross morbid change than are the disfiguring passions and emotions which, like it, impress the muscular system in a great variety of ways without permanent injury and which need for their due development a measure of intelligence not attainable by any of the lower animals. This functional hypothesis of chorea (which is professedly provisional) needs of course to be tested like the others by a full review of the actual phenomena of the affection in its subjects, associations, manner of movement, and of distribution over age, sex and race. I have already discussed some of these points in this journal and elsewhere. I desire now to show, by way of supplementing what has been just said, that in those respects in which, as we have seen, anatomical theories are faulty and inadequate,—that is to say in the character of choreic movement, its ataxy, the muscles it selects, and its modes of onset and of recurrence, —the functional theory (as for convenience we may here call it) actually supplies what is wanting.

It has been seen that in order to provide for the complicated character of choreic movement reference has to be made to diseased convolutions, although by this same reference the question becomes embarrassed by having to account for the rarity of spasm and of paralysis and for the irregular distribution of the disorder over the body. Now upon the functional hypothesis these points have a natural explanation. We observe, for example, that those limbs only are capable of chorea which have been the agents of intelligence, and that amongst these the limbs most liable to chorea are those whose movements are the most complicated. The muscles acquire certain modes of use and it is in virtue of such acquirement that they become subject to this particular motor disorder. Chorea then indicates the withdrawal or the infirmity of controlling power over certain parts of the body and, in the absence of disturbing causes, will be exhibited first and most in those muscles which by nature and training are the most unruly. Its precise manner at whatever age it may occur is due to this: that the muscles concerned have been educated more or less in certain kinds of movement, and that with the nervous disturbance which renders them restless and beyond control these same movements become distorted and involuntary, the will, so far as it is exercised at all, being exercised not in directing or regulating the movement but in suppressing it. We thus see the deformity of chorea and its spasmodic character appearing more and more as we pass from early childhood, where such over-movement being easily concurred in is hardly deforming, to adult life where, the will being in active opposition, the disorder exhibits a corresponding distortion and spasm. The same law is of universal application. Thus for example when the face muscles pass beyond control so as to express sentiments which it is desired to conceal there results from this conflict a true local chorea, a chorea which has many degrees from the slight facial disorder which indicates that some restraint is being put upon the features to the absolute distortion of face which occurs when some violent passion is to be concealed.

Clinical observation shows that the manner of choreic movement is thus determined in great measure by the attitude of the will. In any moderate chorea if the attention

of the child be called to the movement of a particular limb and she be bidden either to increase the movement or to modify it in any particular way the effect of such observation will be to alter for the while the character of the restlessness. Or, again, if a choreic limb be called upon to execute some task it will often be able to obey the order to move although unable to obey the order to be still. Children with marked chorea of the hand and arm will thus, as I have repeatedly found, lift a filled cup successfully to the lips and write their names fairly well, each letter being correctly formed although in such jerky manner as to indicate very clearly the precariousness of muscular consensus.

We are to consider further the bearing of the fact that chorea is no absolute thing, like spasm or palsy, but that it varies with the growth of the individual. The child who has not yet acquired the full use of its voluntary muscles, whose movements are uncertain and without individuality, is the proper and indeed the only subject of such chorea as the books seek to describe, where the motor disorder is altogether featureless and irregular. Losing such steadiness of limb as he possessed the young child becomes restless merely. In the mismovement, as in the natural movement, there is no character or method or rhythm. But when chorea comes to the adult his fixed habits of moving will still appear through the disorder. Certain limbs are affected definitely and after a manner that may be accurately described. Often the mismovement is more or less rhythmical, or there is a recurrent twitching of certain muscles, or the limbs are moved consecutively in a constant order. And I think it may be said that as life goes on choreic movement becomes more and more definite and localised in strict conformity with the natural movements, insomuch that without the aid of the features we might guess with some accuracy the age of a choreic person by the character of his disorder.

But along with these modifications in choreic movement at various ages, to which there is nothing at all corresponding in the symptoms of structural nervous lesion, we are to notice that as with experience and use the voluntary muscles acquire variety so do they acquire stability, and lose the infirmity of childhood. They become less and less subject to chorea, not because they have escaped any of those liabilities to embolism and nervous deterioration which are said to produce chorea, for these liabilities are every year on the increase, but because variety of employment implies muscular accuracy and obedience. Thus there is nothing which so certainly removes the individual from the influence of chorea as education and culture. The more nicely adjusted are the several uses of the higher muscles, or if the phrase be preferred, the more distinctly differentiated the functions of the cortical centres the greater is the power of control. We see this in the voice and face and gesture of the youth of the neglected classes. None of their higher movements are perfectly obedient or accurate. Their muscles in wanting variety want power, and from having few uses are the feebler and more imperfect in such uses as they have. We notice therefore, although their fancies are nimble enough, how vague and shadowy is the expression of them, how easily they fall into convulsive spasm, their ill-controlled features, imperfect power of voice-modulation, and meaningless gestures.

I have spoken already of the ataxia of chorea as contrasted with that of spinal cord disease, but as regards this functional hypothesis it must be insisted, first that morbid changes in the cortex of the brain do not so far as is known provide for ataxy at all, and secondly that the sort of ataxy which we see in chorea is of that psychical kind of which we get the pattern not in structural disease but in the many conditions of mental excitement and perplexity to which all mankind are liable. A choreic child may fail completely in some muscular act to-day which it will accomplish easily to-morrow; the act that is certain to fail when set about deliberately will be performed accurately on a sudden or without thought; the observation of others will sometimes control and sometimes aggravate chorea or it may even have these two opposite effects at different times in the same subject.

Passing on now from the movements of chorea to consider its manner of development and of progress we shall find, I think, still further reason for maintaining the functional theory as opposed to the anatomical. The fact has often been noticed that chorea is sometimes separated from its exciting cause by a distinct interval; such interval is neither constant nor equal, and I am not aware that anyone has been bold enough to speak of a definite period of incubation for chorea. Wherever, indeed, this interval is real and unquestionable it seems to offer a difficulty to all theories alike. But in many instances the interval is not real but apparent, and in these the very gradual development of the disorder, together with the fact (which I believe to be almost invariable) that so soon as it is recognised and observed upon it becomes thereupon more obvious and pronounced, is again in strict accordance with what we know of all muscular failure whatever. But, not to dwell upon this point, what hypothesis except the functional one can be made to provide for a disorder which is recurrent as chorea is, recovering perfectly time after time, and at last when adult life is reached finally disappearing, the signal for this departure being nothing else in the world but the departure of childish ways and the substitution of new modes of response to nervous impressions. And observe that during the time that this liability to recurrence continues it is not the same muscles that are implicated in successive attacks, but rather those which are similar when regarded as intellectual instruments. The manner of the repetition does not accord with any notion of disturbed nerve-centres influencing particular groups of muscles, it accords with the larger and more assured observation that different departments of the muscular system are employed in intellectual and emotional expression at different ages. Thus the recurrence of a childish chorea in adult life will not be an exact repetition of it, but it will be in obedience to exactly the same law; the muscles which at the time are the most sensitive are again the muscles which suffer. A further principle is involved in the case of one-sided chorea happening repeatedly to the same side. The fact may seem at first sight to need some anatomical explanation, but no one will deny that muscular failures and incoördination of whatever kind are long retained and easily recalled. In the articulation of certain words and the performance of certain manual and facial acts the same infirmity of a particular group of muscles will appear again and again however long the interval between one attempt and the next. To say that the muscles remember and that the same muscles are repeatedly disturbed owing to the repetition of an old impression is, I am aware, only to say that the first impression has wrought some change or other in the brain, but it is a change to which at present no material expression has been assigned. The terms of psychology suit it better than those of physiology or anatomy.

But there are yet further reasons for invoking a theory of chorea wider than that of embolism or localised hyperæmia. The associations of the disorder need the same interpretation as do its other characters. There is no condition which is so intimately connected with chorea as hysteria. The two affections are analogous and interchangeable insomuch that the very same symptoms which we should call chorea in the child we call hysteria in the woman; while not seldom the motor and the emotional infirmity are so combined that we see in the same subject now one and now the other the more prominent. It is true that this alliance is not of a kind to help forward any definite settlement of the question at issue. Unlike acute rheumatism or paralysis it provides neither embolism nor disturbed nerve-centres, and accordingly, in order to arrive at any concise pathology, it is almost as necessary to ignore hysteria as it is to exalt these other affections into a far more intimate connexion with chorea than the facts warrant.

In this summary account of the support which the functional hypothesis of chorea obtains from the character of its movements, modes of onset and of recurrence and morbid connexions, I am giving no complete vindication of the theory in question but only considering those particular points in which any purely anatomical hypothesis must be admitted to fail. There are no doubt other symptoms of chorea which may seem to tell a different tale. Especially there are the heart disorders of the affection. It is admitted, I believe, in the present day that the heart symptoms of chorea are special in that they are variable from time to time, apt to disappear with the motor disorder, and but seldom laying the foundation for hypertrophy or other consequences of valvular lesion. But the subject is one which needs further clinical investigation. We have especially to determine the age at which cardiac symptoms are most frequent in chorea. My own observation leads me to believe that heart disorder is almost confined to the younger children and that with adults there is hardly any liability of the kind. How-

ever this may be it is to be remembered that we are provided at present with more literal and intelligible explanations of heart-murmurs arising from functional defects than those which of old referred them to collision of blood-particles and other impossible causes. The heart-murmur of chorea may be the proper sign of muscular fatigue there; it may be due, that is to say (as in the somewhat analogous case of anæmia), to a paresis of the musculi papillares by reason of which the mitral valve flaps intrude into the auricles with every ventricular contraction. It is conceivable, and in the case of anæmia it is demonstrable, that this defect which is commonly only temporary may be rendered permanent in some instances owing to muscular degeneration following the paresis.(a) Whatever the real significance of the heart disturbance of chorea we may safely insist that in many instances the heart remains undisturbed throughout. No pathology of the affection can be maintained, therefore, in which cardiac disturbance is made an essential factor.

But a stronger objection to the functional theory of chorea yet remains. With the advance of physical research no pathology is likely to receive attention which does not bring before the mind a distinct picture of some physical agency and point to the very place and texture of disease. Such demonstration is very readily accepted however inadequate. The observation of a laceratiou of the tongue caused by the contact of the teeth in coughing is at once admitted as a valuable contribution to the pathology of whooping-cough. The announcement that manual pressure upon the abdomen will so affect the virgin ovary as to arrest hysteric spasm is soon followed by plentiful testimony to the efficacy of the practice. Nevertheless, in spite of a bias of this kind which is but the proper revulsion from the vague generalities of old medicine, there are two great principles of research which are eternal and applicable to pathology as to all other investigation. The one is that we are to accept without partiality whatever explanation of phenomena is on the whole the amplest in whatever terms it may find expression. The other is that we are not to invoke extra or hypothetical causes where such causes as appear are sufficient.

I am content, therefore, to regard chorea for the present as a disorder of function. Some structural basis it has no doubt like all other movement, orderly and disorderly, mental and bodily, but in its ordinary dress it displays none of those symptoms which we have succeeded so far in associating with any material morbid process whatever. If it is to be grouped with other disorders it must be with those which, like it, are transient and recoverable, and which attach themselves in turn to each period of life so as to mark the failings and defects of an existence which is not supposed to be perfect. To explain or rather to classify chorea I would look beyond it. Especially I would look to that multiform disorder which at the next epoch of life, when in its turn the emotional part becomes unduly prominent, is prone to arise in the same sex and the same disposition of people, and upon similar incentive in strict parallelism with this motor disorder of restless childhood. Granted that chorea is sometimes amongst the first signs of fatal disease, granted that it has been found associated with various grave lesions of the nerve-centres, may not the same be said of hysteria? Yet no one ventures to believe that such exceptional occurrences will lead us ultimately to the structural basis of hysteria or that they justify the assumption that its ordinary phenomena have their origin in any such gross changes as are so freely ascribed to chorea.

Wimpole-street.

Benzoate of Soda in Gonorrhœal Ophthalmia.—Dr. Dor, who for the last two years has used the benzoate of soda with great success in the purulent ophthalmia of infants, has recently had the opportunity of treating a well-marked case of gonorrhœal ophthalmia, recovery taking place in a few days, without any opacity being left. He kept iced compresses constantly to the eye. The benzoate of soda was employed in a 20 per cent. solution, and taunin in a 10 per cent. solution, ten drops being instilled every three minutes. All secretion which issued from the eye was removed by means of a wash consisting of a 100 per cent. solution of the benzoate.—*Lyon Méd.*, March 7.

(a) See Immermann on this subject in his article "Anæmia," vol. xvi., "Ziemssen's Cyclopædia of Medicine," page 399 etc.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

GUY'S HOSPITAL.

A CASE OF EMPYEMA, COMPLICATED WITH LYMPHOMATA, GLYCOSURIA, ETC.

(Under the care of Dr. WILKS.)

[The account of this case is taken from the notes of Mr. Percy Warner, Ward Clerk.]

Philip R., a horsekeeper, aged twenty years, was admitted on March 3, 1880. He stated that he had always enjoyed fairly good health; he had occasionally suffered from a cold or cough, but had never been laid up. There was no history of syphilis or gonorrhœa. Eighteen months ago he married; his wife had one child, now four months old and in good health. Patient's father and mother were both alive and fairly healthy. He was one of sixteen children, eight of whom were alive; and there seemed to be no family predisposition to lung or other disease. Four weeks before admission he began to suffer with cough, with much white frothy expectoration. A week later he had pain in his left side, and went under medical treatment, but was not benefited by it. At the end of another week he noticed that his "stomach" was swollen, and during the week before admission his face was swollen. For two weeks he had passed more urine than usual, and noticed that he had to get up as often as six or seven times in a night to empty his bladder. The urine, he thought, was not altered in colour. The bowels had been relaxed during the same period, being open six or seven times a-day. The motions were of a light colour. He had not complained of any special feeling of malaise or aching pain anywhere.

On admission, patient is rather short aud robust-looking; his expression is cheerful. The face is somewhat puffy; the pupils are dilated; he seems to be well nourished. He lies on his back in bed, and says that he cannot lie on his right side for shortness of breath aud cough. He has slight thirst, but no headache; his chief complaint is of the cough and the swelling of his face. He does not complain of pain ou inspiration or in coughing. His feet are not swollen, and the abdomen is only slightly prominent. On inspection, the chest is seen to be well formed; respiration is chiefly thoracic, and the left side can be seen to move more freely than the right. There is no perceptible bulging or shrinking of the intercostal spaces. On palpation, the right side can hardly be felt to move at all, but the left side moves freely. Vocal fremitus is wholly absent on the right side, in front below the nipple, and behind as far as the inferior angle of the scapula. On percussion, resonance is found to be normal both in front aud behind on the left side; ou the right side the chest is resonant above the nipple in front, but below that it is quite dull; behind there is absolute dulness at the base to the inferior angle of the scapula, and impaired resonance for two inches above the same point. On auscultation, the sounds on the left side are normal, with perhaps a slight roughening at the posterior part of the base. On the right side breath-sounds are altogether absent at the extreme base behind as far as the angle of the scapula, tubular to the spine of the scapula, and expiration is prolonged and rough above. The respirations are 30 to the minute. There is no ægophony. The heart-sounds are normal; the pulse is 96. The tongue is pale, and is furred along the centre of the dorsum; appetite is good; bowels are loose. The abdomen is slightly enlarged, and the liver can be felt one inch below the ribs. The uriue is alkaline, very full of phosphates, pale, specific gravity 1020; it contains no albumen, but sugar is present. Temperature 99·2°.

March 4.—The urine contains less phosphates and is darker in colour; it is still alkaline and contains sugar; specific gravity 1036. The bowels are less relaxed. Pulse 102; respirations 30. He complains of pain in his left side, and emplastrum lyttæ has been ordered to be applied there.

5th.—Morning temperature 101·2°, evening 100°. The cough is more troublesome, and the expectoration is becoming purulent; the cough causes severe pain iu the right side. He perspires very freely, and says that he feels "out of sorts."

6th.—Evening temperature 99·4°. Urine, of high specific gravity, contains sugar.

8th.—The cough is less troublesome, and patient says that he feels better. In the front of the chest the dulness is absolute on the right side as far as to a level with the third rib. Behind, at the base, faint breath-sounds are heard, and rhonchi on inspiration and expiration. He complains less of pain with his cough. This morning he brought up a small quantity of blood—less than a quarter of a pint.

10th.—The temperature has been little above normal, or normal, since the 6th inst. The urine continues alkaline, of high specific gravity, and contains sugar, but no albumen. The quantity passed is fairly large, but not excessive.

12th.—No more blood has been coughed up. Breath-sounds are to be heard all over the right side of the chest; they are distant and tubular; no moist sounds or friction can be made out, and the expectoration is less abundant. Temperature, yesterday morning 100·2°; to-day, morning 99·4°, evening 100·4°.

13th.—Morning: Patient seems pretty well to-day. He was able to get up for a little last night, and says that he feels better altogether. Temperature 100°. At 3.30 p.m. patient had a fit; he was strongly convulsed for three or four minutes, and lost consciousness. He became black in the face, but did not bite his tongue or pass water or fæces. He then completely recovered consciousness. Ten minutes later he had a similar fit, but a stronger one. The pupils were dilated and equal; the skin was sweating; there was no dyspnœa. He remained semi-comatose for about twenty minutes, throwing his arms about and breathing stertorously. 4.30 p.m.: Patient can be roused, but still seems to be in a semi-comatose state. There are no abnormal heart-sounds, his breathing is easy, and there are no signs of collapse. There is neither twitching nor rigidity of the muscles. In the urine passed there is no albumen, but in that drawn off by the catheter there is a slight trace, and there is abundant sugar. A croton-oil pill and some brandy-and-water were administered. Patient had several more fits—seven in all—of a similar nature, and died at midnight in convulsions. Before death the temperature went up to 103°.

Post-mortem Examination (conducted by Dr. Goodhart).—The right pleural cavity contained a pint and a half of pus, and the pleura was covered with a layer of lymph. The right bronchus was compressed, and its walls were infiltrated by an enlarged bronchial gland of the size of a plover's egg, and secondary changes were present in the right lung as a result. The whole lung was in a condition of catarrhal pneumonia. The upper lobe was dense and firm in consistency and of greyish colour. The lowest lobe was in a more advanced stage of the disease. The bronchial tubes were very prominent; the tissues around were dense, and were commencing to soften. In the small middle lobe the changes were still more advanced, and the lung substance was partly broken down. No serious changes had occurred on the left side, and there was nothing noteworthy about the heart. The liver was large; in its substance were found numerous cancerous-looking nodules, ranging in size from that of a pea to that of a walnut; none of these nodules were nearer the anterior edge than about an inch and a half, so that it would have been impossible to detect them in life. Subsequent microscopical examination showed that these nodules were lymphomatous in structure. Along the front of the spine there was a diffused, ill-defined, cancerous-looking deposit (this was not examined microscopically). On examining the brain there were found to be well-marked signs of recent acute purulent meningitis; this was more marked in the neighbourhood of the vertex. The other organs and parts appeared to be healthy.

Remarks.—The case presented many remarkable features, and was full of difficulties throughout. The aspect of the patient suggested Bright's disease at first when he appeared in the out-patient room; the puffiness of the face was not satisfactorily accounted for at the post-mortem by any demonstration of direct pressure upon the veins of the upper extremity. The primary mischief appeared to have been in the thorax, but the early symptoms must have been of very slight intensity, and in the presence of the empyema the temperature fluctuated very little, and the presence of pus was not indicated by any rigors. The constitutional disturbance throughout was comparatively slight, and on the day of his death patient seemed to be unusually well. During the whole time of his treatment in the hospital the urine remained alkaline; its specific gravity ranged from 1029 to 1042; except at the last, it remained free from albumen, but contained sugar; it was never excessive in quantity. The glycosuria was evidently not of old standing, but was probably connected with the other disease.

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Medical Times and Gazette.

SATURDAY, MARCH 27, 1880.

THE LUNACY LAWS.

In his work on Constitutional Law, entitled "Fifty Years of the British Constitution," which has just issued from the press, Professor Sheldon Amos thus refers to the Lunacy Laws:—"The Lunacy Commission as now existing, which superintends and controls in detail the operation of the Lunacy Acts is charged with the duty of watching with the utmost possible minuteness the operation of the Acts. Nevertheless, even here, the operation of the Acts as affording an insufficient protection to the liberty of the sane, so long as an imputation of insanity is beneficial to the interests of influential relatives or neighbours, has lately been brought into most serious controversy. Probably, however, the remedy is here near at hand, and the interposition of a justice of the peace and a quasi-judicial proceeding would obviate many of the difficulties at present experienced." Professor Amos ought to have added that the result of the serious controversy, as far as it has gone, has been to show conclusively that the liberty of the subject is not in any degree endangered by the Lunacy Laws as they now exist, and that the nefarious conduct of influential relatives and neighbours in making groundless imputations of insanity is the mere phantasm of a half-morbid imagination. He ought not to have been ignorant that a Select Committee of the House of Commons, which two years ago investigated the operation of the Lunacy Laws, with special reference to personal liberty, in the most thorough and painstaking manner, reported that the accusations of *mala fides*, or the serious abuses brought before them, were not substan-

tiated, and that in recent actions which have been brought for wrongous detection in lunatic asylums, verdicts have been returned to the effect that no wrongous detention had taken place. It is vain to inveigh against the abuses which take place under the Lunacy Laws until a particular instance of abuse has been brought to light; and Professor Amos will probably admit that it is a very remarkable fact, that whereas upwards of 13,000 persons are incarcerated in lunatic asylums in this country every year, not one instance of advantage having been taken of the Lunacy Laws to gratify personal malice or greed has been discovered of late years by the officials who are constantly inspecting asylums, or has been proved to the satisfaction of a jury. It would seem that the Lunacy Laws are as satisfactory in their operation in this respect as it is possible for laws to be which of their nature tend to encroach on liberty, and must therefore always be regarded by the public with some suspicion and aversion.

The remedy which Professor Amos favours for abuses and difficulties which have not been proved to exist will probably commend itself to the medical profession as a protection against other evils which are real enough and of a pressing character. The interposition of a justice of the peace and a quasi-judicial proceeding in every case of lunacy in which seclusion in an asylum or interference of any kind with personal liberty is deemed requisite, would at once relieve the medical profession of grave responsibilities which it has now to bear, and of serious risks which it has to run. In that case we should hear no more of actions brought against medical men on account of the lunacy certificates which they have signed—actions which are costly and vexatious, and which may be damaging to pocket and reputation even when the certificates are vindicated in every respect. It is well known that several eminent medical men make it a rule never, under any circumstances, to grant a certificate of lunacy, and it has been mooted lately that it would be well for the profession, as a body, to adopt a similar practice. Why, it is asked, should doctors, for a guinea fee, expose themselves to the perils of the law? Let them, one and all, it is urged, refuse to undertake the liabilities which are involved in adhibiting their names to lunacy certificates, and the public will then speedily arrive at a just estimate of the value of the services which they have hitherto performed in this respect, of the judgment and care with which these services have been rendered, and of the impracticability of providing any efficient or even tolerable substitute for them. It has been calculated that the total amount received by the medical profession in England and Wales on account of the certification of lunatics, private and pauper, does not exceed £9000 annually, and the loss sustained by cutting off this source of revenue would therefore be quite insignificant, whereas the gain in tranquillity of mind would be vast indeed. The obstacles, however, in the way of organising any professional revolt such as is shadowed forth in this line of argument, to say nothing of the economical and ethical considerations by which it might be opposed, may well reconcile its advocates to the scheme which Professor Amos hints at, and which would secure all the advantages, without any of the drawbacks, of a combination against the present system of certification of the insane. A magistrate, and a quasi-judicial proceeding, with or without medical evidence, would remove, once for all, from the shoulders of the profession the burdens too grievous to be borne which have been imposed on them in this matter, and would leave putative lunatics to settle their grievances with others than their medical advisers.

While, however, the creation of a petty tribunal for the diagnosis of mental disease would be an unmixed boon to the medical profession, it may well be doubted whether it would be equally advantageous to the public, or would supply safeguards of personal liberty superior to those which now exist, or even equal to them. Those with practical experience in public affairs will probably tell us that, after a time the quasi-judicial proceeding before a justice of the peace would, in a large majority of instances, degenerate into the merest routine. Here and there ignorant and crotchetty magistrates would woefully obstruct the early and efficacious treatment of the insane, and cause and protract domestic misery, but generally the result would be that magistrates would act in a purely ministerial capacity on the evidence submitted to them, and that evidence would be given without the extreme caution that is now bestowed upon the facts indicating insanity observed by the medical man himself, when these are set down under a deep sense of the personal responsibility involved in arriving at a decision momentous alike to the patient and practitioner. The new system would, it may be contended, increase the risks of dangerous lunatics being left at liberty, and of sane persons being shut up as lunatics, and would deprive the latter of the remedy for their injuries which they now enjoy, and of the *solatium* for wounded feelings which heavy damages are understood to afford.

Those who think that a magisterial inquiry in cases of insanity would extinguish the agitation against the Lunacy Laws, of which we have recently heard so much, cannot have investigated the history or origin of that agitation. It is an affair of old date, which perpetually smoulders in our midst, and bursts forth into active eruption from time to time, and it arises in great measure out of the nature of the lunatic mind. Insanity often destroys the very powers of mind which might identify it, and hence a majority of lunatics will not admit that they are or ever have been insane. A man with small-pox or heart disease recognises his own malady, but a palpable lunatic often bitterly resents any imputation of mental disease. In lunatics who are insane upon a few points only, and who labour under some obscure or remittent forms of mental derangement, and in patients who have been discharged from asylums when only partially cured, the passion to prove themselves sane, to punish those who have treated them as lunatics, and to relieve others who are subjected to what they regard as wrongs like their own, becomes itself a monomania, which subordinates for a season the deeper-seated derangement. The new purpose steadies the mind. They throw themselves into the new work with fervour, and while engaged in it display no obtrusive traits of insanity. Such persons it is—and they are often plausible and energetic—who have greatly fomented agitations against the Lunacy Laws. They are not only horrid examples but active agents. Associated with sickly philanthropists, ill-informed publicists, and a number of well-meaning but rash citizens, they stir up alarm and clamour for reform. Such persons are likely to be always with us, and it is beyond hope that any measures that can be devised will permanently satisfy them. Legislation conceded to their demands will lull them to silence for a little, but anon we shall have them and their successors at work again agitating and demanding new laws. To a man who thinks he has been mistaken for a lunatic it cannot be absolutely consolatory to be told that it was a magistrate who committed the blunder, and we may rest assured that any quasi-judicial proceeding in the case of lunatics would not go long unchallenged. Actions for wrongous detention have occurred in Scotland, where all lunatics are committed by a sheriff's warrant; and pauper lunatics in England, who are now detained on a magistrate's order, complain of unjust incarceration in proportionately as large numbers as do private lunatics.

For the sake of the medical profession it is highly desirable that changes in the Lunacy Laws such as Professor

Amos indicated should be effected forthwith. These changes, however, should be adopted with a clear appreciation of their probable effects, and with no futile anticipation that they will prove a panacea.

"HYALINE DEGENERATION."

A KIND of degeneration of the vessels and substance of the lymphatic glands, which, although it has probably been observed in this country, does not appear to have been regularly investigated or named, has been recently described by Wieger, a pupil of Recklinghausen's, in *Virchow's Archiv* (vol. lxxviii., part 1, page 25), and deserves the careful attention of English pathologists. The disease, for which the name of "hyaline degeneration" has been proposed, naturally presents different characters, according as it affects the vessels or the proper substance of the lymphatic glands. When the former are the seat of the change, the smallest bloodvessels of the gland are found to be converted into hyaline tubes, their wall being greatly thickened and their lumen narrowed. The hyaline material possibly consists of a cellular infiltration of the vessel-coats, especially the adventitia. The final stage of the process consists of a diffuse calcification. Chemically, the hyaline substance is to be distinguished from the connective tissues, and to be classed with the colloid materials. With respect to the cause of this degeneration, the most important factors appear to be circulatory disturbances in conditions of dyscrasia or senility.

The naked-eye appearances of glands, when their vessels are thus affected, are not characteristic until a section is made, when a perfectly typical picture is presented. Instead of the familiar characters of a lymphatic gland, there is seen, upon a somewhat congested ground, an extremely fine and delicate network of whitish, more or less opaque, somewhat prominent trabeculæ, which divides the section into a number of small fields of tolerably normal appearance. To the fingers the trabeculæ feel firm and even sandy, and nodules occur at their points of communication. Such networks are by far most abundant in the peripheral portion of the gland. The degeneration affects the different groups of glands very unequally; the lumbar glands apparently seldom escaping in any case, and the inguinal and axillary glands being next most commonly invaded, whilst the mesenteric glands have never been found involved. Altogether, Wieger found the disease in ten cases in the course of 600 post-mortem examinations made during a period of nine months.

With respect to the minute anatomy of the process, it is found to be confined to the follicular substance of the lymphatic glands, and never to invade the lymph-paths. The disease is readily referred to the capillary vessels, which are enlarged by thickening of their walls, whilst their canal is diminished or even obliterated; and this by the presence of a highly refractive, translucent substance which is not unlike the matrix of hyaline cartilage. Careful examination sometimes revealed traces of the tunica intima within the zone of new material, and even appearances of the remains of a tunica media, so that the degeneration would appear to have its seat, in these instances, in the adventitia of the capillary arteries. Treatment with staining fluids and other reagents failed to reveal the presence of nuclei or of anything resembling the contour of a cell in the degenerated coat. The gland-tissue lying between diseased vessels may be atrophied by pressure, but otherwise remains healthy. The process appears to proceed from the centre of the lymphatic follicles outwards. The last stage of hyaline degeneration seems to be calcification, and the removal of the calcareous particles by means of an acid leaves the substance translucent as before. Of special interest is the reaction of the hyaline substance to the ordinary tests used in morbid histology. Iodine solution colours it of a light straw-tint only, and the amyloid reaction is entirely wanting. Water does not affect it; and the mineral and acetic acids hardly cause it to swell, increase its translucency, but bring out no nuclei in it. Alkalies produce marked translucency, so that the substance become vitreous and absolutely amorphous, whilst it swells considerably. It shrinks when boiled in water, and is not dissolved even when the process is prolonged. Carmine, picro-carmine, and eosine stain it deeply hæmatoxyline and aniline-brown not at all. From these reactions it may be gathered that the hyaline substance is most nearly related to colloids, and has little affinity with condensed connective tissue and no affinity with amyloid material.

What is the genesis of this hyaline substance, and what are the beginnings of the process? In a single case only Wieger found an appearance which may possibly represent the first stage of the change, namely, a fusiform swelling of individual vessels, due to the development of cells which lay closely adherent to the vessel-wall and to each other, not unlike leucocytes, or fused together in such a manner that their contours were indistinguishable. Careful examination revealed that the cells were actually an infiltration in the adventitia of the vessel, and that where the cell-contours had disappeared, the resulting masses bore a strong resemblance to the "hyaline" substance. But whether this appearance actually advances to hyaline degeneration, Wieger declares himself unable to determine. Wieger believes that this hyaline degeneration has no relation to the arterio-capillary fibrosis of Gull and Sutton. It is probably almost identical in most of its characters with the peculiar change which is found in the vessels of the cortex cerebri and pia mater in dementia paralytica; but there is at present no evidence that the two processes occur at once in the lymphatic glands and in the cerebral vessels—that is, that they are one and the same.

Besides the hyaline degeneration of the vessels of the lymphatic glands just described, Wieger twice met with a somewhat similar, if not identical, change in the proper tissue of the glands, which, however, he believes to be due rather to a chronic inflammatory process. When the process is advanced, the glands are absolutely white or greyish-white, highly anæmic, and not unlike amyloid liver in consistence. The subjects of the disease had died in both instances in a condition somewhat resembling acute tuberculosis.

THE ROYAL COLLEGE OF PHYSICIANS OF LONDON

AT the meeting of the Royal College of Physicians held on Monday, the 22nd inst., the principal business before the Fellows was the election of a President of the College. This important duty is of annual recurrence, and the method of discharging it is peculiar, and not without some disadvantages. The constitution of the College in this respect is very liberal, inasmuch as the President is chosen from among the Fellows by the Fellows at large, and is elected annually. This was the constitution bestowed on the College at the first by the letters patent of Henry VIII., in 1518. But shortly after, by the statute 14 Henry VIII., the privilege of the election of the President was withdrawn from the College at large, and vested in eight of the senior Fellows, who were styled Elects, and were empowered to superintend and govern the College. The Elects chose the President annually from among themselves, and themselves filled up any vacancy occurring in their own body; and this system lasted till so lately as the year 1860, when an Act of Parliament was passed, by which the body of Elects was allowed to die out, and the functions discharged by them reverted

to the Fellows at large; one of the most important of such functions being the annual election of the President. The same Fellow may, however, be re-elected President for any number of years in succession; there is no rule or system of election according to seniority, and no nomination or recommendation of anyone for the office may be made, either by the Council or by any other "person," individual or collective, "natural or artificial." When the year for which any Fellow has been President expires, he lays down the insignia of office, and the College proceeds at once, without any guidance or concerted consideration, to elect, by ballot, his successor; the majority of the Fellows present not knowing, unless by intuition or by some "underground" means of communication, whether the late President desires re-election, nor whether any Fellow whom they may deem specially eligible is willing to accept the somewhat onerous, though highly honourable distinction. The election takes place by a "fortuitous concurrence" of votes: and the consequence may be that there is a scattering and waste of votes; or an unexpected and undesirable difference of opinion; or a very frequently repeated re-election of the same Fellow. Men are unthinkingly led to say they "don't like to turn a good man out"—we have heard the phrase used—when they have not even a chance, in reality, of doing any such thing; the question being, shall the same good man be put in again, or shall another good, or possibly better, man receive in his turn the distinction which, it must be supposed, every Fellow of the College would be proud to arrive at. The system of election of the President is altogether very much better than that which obtains in the sister College of Surgeons, but it is worth while for the Fellows to consider whether it may not be improved as regards the length of the time for which one man usually holds the office. Dr. Mayo, who was the last President chosen by the Elects, and took an active part in restoring the election to the Fellows at large, retired absolutely in 1862, when he had been President for five years. Sir Thomas Watson, who succeeded him, also held the office five years, as did Sir George Burrows; while Sir James Alderson, who came between them, retired after four years' tenure. One year only, as at the College of Surgeons, is too short a time, but, looking at the number of Fellows who may justly aspire to the office, is not five years too long, as a rule? If any term, beyond the first year of election, is to be so fixed, by long custom, that any shortening of it by non-reëlection would seem invidious, we should say that a term of three years would be much more satisfactory to the College at large than one of five years.

Such reflections as these are naturally excited by the recurrence of the annual ceremony at the College of Physicians; but we have nevertheless much pleasure in congratulating Dr. Risdon Bennett on his re-election as President on Monday last in a most unusually large College meeting. It is a proof of the satisfactory way in which he has filled the office, and of the confidence of the College in him, of which he may justly be proud.

The only other business of importance transacted was the enactment, for the second time, of the new Regulations for Candidates for the College Licence, upon which we have commented very lately. All candidates who commence their professional studies after March 25 of this year will come under the new regulations.

THE WEEK.

TOPICS OF THE DAY.

It is announced that a scheme has been prepared by the Provisional Committee of the Metropolitan Provident Dispensaries Association, by which it is hoped that no fewer than fifty institutions of this class will shortly be in working order in London. The Committee consists of representatives of the leading friendly societies, of delegates from the governing bodies of the London hospitals, of members of the medical profession, of the Hospital Saturday Fund, and of the Charity Organisation Society. It is estimated that about half the working-men of London belong to friendly societies, most of which provide medical attendance for their members, but not for their wives and children; the latter consequently, as a rule, become out-patients at the hospitals. It is re-asserted, of course, and with as little real proof as ever, that at least one-fourth of the population of London receive gratuitous medical tretament, and although the large majority would undoubtedly be unable to employ a medical attendant, it is certain that many of them could afford to pay a small fixed sum for advice and treatment. It is proposed to give every family joining the new dispensaries the option of choosing their own medical attendant from the staff, whose duties are to assist in "looking after the sanitation of the dwellings, making themselves acquainted with the constitutions of the different members of the family, and treating every malady, as it arises, with the promptness required to prevent serious mischief." It is thought that there are at least half a million persons in the metropolis who would join the dispensaries in order to escape from the pauperising influences and insufficient treatment experienced under the existing system. It is contemplated to organise the new scheme on the action of the friendly societies, as has been done at York, Scarborough, Sheffield, Derby, and other places in the North. The scheme is a very large and pretentious one; and we gravely doubt the possibility of carrying it out in London in such a way as to benefit either the public or the profession.

A woman named Elizabeth Thompson was last week charged before the county magistrates sitting at Liverpool with an offence under the Infant Life Protection Act, viz., with having two infants under the age of one year for the purpose of nursing, apart from their parents, for a longer period than twenty-four hours, without being duly registered for the purpose. Attention had been attracted to the woman through the deaths of two children while in her charge. She had, moreover, been repeatedly warned that she must take out a licence. The woman now said she would take out a licence, but the magistrates imposed upon her a fine of 40s. with costs.

The British Vice-Consul in the Canary Islands has considered it necessary to address a letter to the *Times* as a warning to invalids who may be attracted by the great beauty of the climate of these islands, and the increased facilities of communication, to pay them a visit. Invalids—especially those suspected of consumption—who have no personal friends to lodge them are not received in any hotel, and cannot hire even an empty house, and there remains for them, therefore, no resource but the hospital. Several instances have recently come to the notice of this gentleman, where persons in ill-health, although apparently well, have been summarily ejected from the hotels into which they had been at first received, so soon as it was discovered that they were suffering from some disease, though not contagious, and they were compelled to leave the islands, to the great detriment of their health.

At Guildhall Police-court, last week, a farmer of Glastonbury was summoned for sending the carcases of ten sheep to the London Central Meat Market in a diseased condition, and unfit for human food. The attention of one of the inspectors of the market was called to the meat by a salesman, and the defendant subsequently admitted to the inspector that he had lost nearly all his flock from "fluke disease,"

and that he had the ten sheep in question killed and sent up to London. Dr. Sedgwick Saunders, the City Medical Officer of Health, said the carcases presented all the appearances of animals that had suffered from fluke disease, and they were about the worst specimens of the disease that had ever come before him. The defendant was fined £20 and £2 2s. costs, or one month's imprisonment, and Alderman Nottage observed that before he finally disposed of the case he wished to say that he was given to understand that it was reported in the metropolis that the City authorities would not prosecute in cases of "fluke disease," or, if they did prosecute, no conviction would take place. He wished to remove that impression from the minds of people, not only in the metropolis, but particularly in the country districts. He was informed that no fewer than 400 of these diseased sheep had been sent to London for sale as food, and he wished it to be understood that those who sent such meat to London would be proceeded against, not only by the City authorities, but by the metropolitan authorities, and would be very severely punished.

Some further particulars concerning the recommendations of the Army Commission on the Indian Forces have now been published. The reorganisation of the Medical Service is treated at great length, and some of the recommendations have already even been carried out. The Commissioners consider that the Indian Services and the British Medical Service in India should be amalgamated into one medical corps; but if the present institution is to be kept, then they propose that the military should be separated from the civil branch of the service, one military surgeon-general to be appointed ordinarily from the British Service, three deputy surgeons-general for each army corps, and twenty-four brigade surgeons. Several other proposals are made, and the total saving under the head of medical administration is estimated at two million and a quarter rupees annually.

The *Broad Arrow* says:—"The Committee of the Shepherd Memorial Fund have completed their labours, and have notified to the Senatus of the University at Aberdeen that they will be ready to hand over the gold medal in time for competition in the next session. The medal bears on its obverse side 'Shepherd Memorial Medal for Surgery, instituted 1879,' and surrounded on one edge by a wreath of cypress, and on the other of yew, emblematic of his death and of mourning for him. On the reverse runs 'University of Aberdeen; awarded to,' with a blank space for the name of the winner and date, and a laurel wreath suggestive of the success of the competitor. The marble slab will be erected in the Lochiel Cushnie Church next week, and the memorial brass for the church at Netley Hospital is far advanced towards completion."

At the Freemasons' Tavern, Great Queen-street, last week, Major Graham, the late Registrar-General, was presented with a life-size portrait of himself (painted by Mr. Frank Holl, A.R.A.) upon his retirement after his long tenure of office. The presentation was made by Mr. Beckwith, of Leeds, who said it gave him great pleasure, on behalf of the registration officers of England and Wales, to hand Major Graham the address accompanying it. The address congratulated the late Registrar-General upon his valuable services during the number of years he held office, and stated that during that period the census had been thrice successfully taken and made available for the public use. Through his sanction and guidance the department in connexion with the public health had been established and confirmed, and under his administration effect had been given more or less to many and various Acts of the Legislature, all promoting in different degrees the well-being of the people. The address further thanked him for the vigorous superintendence which he devoted to the business of the department, and for his kindness and courtesy to the officials generally.

At the usual fortnightly meeting of the managers of the Metropolitan Asylums district the report from the fever and small-pox hospitals was presented. It stated that the number of fever patients admitted at Stockwell Fever Hospital during the fortnight ended 19th inst. was 28; that 5 had died, 67 had been discharged, and 121 remained. At Stockwell Small-pox Hospital, 12 fever patients we readmitted, none died, 6 were discharged, and 6 remained. At Homerton, 39 fever patients were admitted, 4 died, 40 were discharged, and 53 remained. At Deptford, 29 fever cases were admitted, 2 died, 2 were discharged, and 56 remained. The total number of cases remaining is 236, showing a decrease on the previous fortnight of 77. At Homerton Small-pox Hospital, 44 small-pox patients were received, 11 died, 18 were discharged, and 96 remained. At Fulham, Hospital, 7 small-pox cases were admitted, 5 died, 19 were discharged, and 38 remained. At Deptford, 15 cases of small-pox were admitted, 3 died, 27 were discharged, and 36 remained. The total number remaining under treatment was 170, as against 187 in the preceding fortnight. Mr. Galsworthy moved that "It being desirable to ascertain the relative percentage of non-pauper patients (if any) to pauper patients sent to and treated at the several fever and small-pox hospitals of the managers, the various hospital committees are hereby instructed to cause inquiries to be made at their respective establishments, and to report the results to the managers." After some discussion this motion was carried.

THE MEDICAL SERVICE OF THE ROYAL NAVY.

The Departmental Committee that has been appointed to take into consideration the present condition of the Naval Medical Service, and to find out by what means that Service may be made sufficiently attractive to eligible candidates, appears to be well constituted. It consists of Rear-Admiral A. H. Hoskins, C.B. (President); Dr. J. Watt Reid, Director-General of the Medical Department of the Navy; Mr. W. Willis, Deputy Accountant-General of the Navy; Fleet-Surgeon H. Fegan, M.D., C.B., R.N.; Staff-Surgeon H. C. Woods, M.D., R.N.; Surgeon John Tyndall, R.N.; Mr. W. B. Gurdon, C.B., First Class Clerk, Treasury; and Mr. J. W. Garnell, Senior Clerk, Medical Department, Admiralty, as Secretary. The Admiralty have persisted, as did the War Office, in turning a deaf ear to all complaints till they found themselves absolutely without eligible candidates for commissions in the Medical Service of the Royal Navy; and, while we trust that the result of the inquiry at last instituted may be as satisfactory as that made—when driven to it—by the War Office, we will venture to hope that it may be more speedily arrived at.

KING'S COLLEGE HOSPITAL.

Mr. W. Watson Cheyne, M.B., C.M. Edin., and F.R.C.S. Eng., has been appointed Assistant-Surgeon and Demonstrator of Practical Surgery at King's College Hospital, in the place of Professor Gerald Yeo, M.D., who had resigned those appointments in order to devote himself more entirely to physiology. Mr. Watson Cheyne has for some time held the office of Surgical Registrar to King's College Hospital, and both he and the Hospital are to be congratulated on his appointment on the permanent surgical staff. We believe that the junior staff appointments are permanent *now?* But it is a remarkable and significant fact that this is the fourth time in succession that a vacancy in the staff of King's College Hospital has been filled up by an outsider.

FACULTY OF MEDICINE, UNIVERSITY OF OXFORD.

The following notice by the Regius Professor of Medicine, Oxford, has been forwarded to us for publication :—"Candidates for the several examinations in medicine are informed that, in conformity with the statute passed on December 17, 1879, examinations for the First (or scientific), and for the Second (or practical part), and for the Certificate in State Medicine and Public Health, will be holden during Trinity Term next, *i.e.*, at an early date subsequent to May 15. Notice will be given in Easter Term stating the days and hours of each examination. Intending candidates are requested to forward to the Regius Professor of Medicine, 'Medical Department, Museum,' their names, addresses, standing, and the date of passing their final examination in Arts."

HOLBEIN'S PORTRAIT OF SIR WILLIAM BUTTS, M.D.

Two of the most beautiful of the portraits by Holbein that were in the lately closed Exhibition of Works by the Old Masters, at Burlington House, have been for a few days on view in the Library of the Royal College of Physicians of London. They are the portraits of Sir William and Lady Butts, and are exquisite examples of Holbein at his very best. Sir William Butts was an M.D. of Cambridge, and a Fellow of Gonville Hall; and was admitted a Fellow of the Royal College of Physicians in 1524. He was Physician to Henry VIII., and the friend of Wolsey, Cranmer, and Hugh Latimer. He was knighted by the King, and immortalised by Shakespeare in his historical play of *Henry the Eighth*. In act v. scene ii. of that play he is introduced as rendering eminent service to Archbishop Cranmer by pointing out to the King how the Lords of the Council kept the Archbishop waiting at the door of the Council Chamber, "'mongst pursuivants, pages, and footboys." The pictures were kindly lent to the College for a short time by the owner, W. H. Pope Carew, Esq., through the good offices of Dr. J. W. Ogle; and we believe there is some hope that the College will be enriched by a copy of the portrait of Sir William Butts, by Mr. Richmond, R.A.

THE REGISTRATION AND INSPECTION OF LAUNDRIES.

At a recent meeting of the Executive Committee of the Dublin Sanitary Association, a number of resolutions relating to the sanitary regulation and supervision of laundries, lately adopted by the Society of Metropolitan Medical Officers of Health (Dublin), were brought under the notice of the Committee. The first was—"That in the opinion of the Society of Metropolitan Medical Officers of Health it is essential for the protection of public health that all public laundries should be registered and subjected to special surveillance"; and the second defined a public laundry, thus :—"That every person who undertakes to do laundry work for others than the actual residents of the house in which a laundry is situated should be deemed to have a public laundry." The remaining resolutions provided for the closing of a public laundry whenever any case of infectious disease occurs in any part of the building, and for the after disinfection of the whole house and laundry; for the proper disinfection of articles of clothing exposed to infection before being sent to the laundry; and for other sanitary observances. After consideration and discussion of the resolutions, it was unanimously resolved—"That the Executive Committee of the Dublin Sanitary Association, having carefully considered and discussed the resolutions in reference to the registration and inspection of laundries, are of opinion that it is most desirable, in the interest of the public health, that the valuable and practical suggestions embodied in the said resolutions should be carried into effect with as little delay as poss ble."

PATHOLOGICAL SOCIETY OF DUBLIN.

At the meeting of this Society on Saturday, March 20 (the President, Dr. E. H. Bennett, in the chair), Dr. J. W. Moore presented a portion of the ileum from the body of a girl, aged twenty, who died on the seventeenth or eighteenth day of an attack of typhoid fever accompanied by serious cerebral symptoms, and by remarkable hyperpyrexia in the death-agony. The *tache cérébrale* (cerebral macula) was well-marked; there were insomnia, subsultus affecting the face and neck as well as the forearms, low muttering delirium, unequal dilatation of the pupils, and coma vigil. Profuse diaphoresis occurred during the last few days of life. Twenty-four hours before death the temperature rose to 106·4° in the axilla, but was reduced to 104° by means of a cold bath (temperature 70° to 60° Fahr.) and the wet pack. Five minutes before death the axillary temperature rose to 109·8° Fahr. The brain and its meninges were hyperæmic. A cloudy deposit of lymph lay on the arachnoid membrane in places, and there were some soft stringy clots in the decending cornua of the lateral ventricles. The lower part of the ileum was intensely hyperæmic. Peyer's patches were swollen, and sloughs were beginning to form in those situated near the ileo-cæcal valve. The solitary and the mesenteric glands were enlarged, as was also the spleen.

THE LATE MR. THOMAS BELL, F.R.S.

Mr. Thomas Bell, F.R.S., F.L.S., etc., who some years ago was very well known in London as a dentist and as a zoologist, died at his residence, The Wakes, Selborne, on Saturday, the 13th inst., at the age of eighty-seven. He had for many years a large practice as a dentist, and was for some time Dental Surgeon and Lecturer on Dental Anatomy at Guy's Hospital. He was also well known in the scientific world, and for a long time was Professor of Zoology in King's College. He was author of histories of "British Quadrupeds" and of "British Reptiles," and wrote also a treatise on the Anatomy and Diseases of the Teeth. Mr. Bell was for some time Secretary to the Royal Society, had held the office of President of the Linnæan Society, and was corresponding member of several foreign scientific societies. About eighteen years since he gave up practice, and retired to Gilbert White's house, The Wakes, at Selborne; and when he was eighty-four years old he brought out an edition of Gilbert White's "Natural History of Selborne."

UNIVERSITY OF ST. ANDREWS: THE UNITED COLLEGE IN DIFFICULTIES.

It will be a source of regret to many of our readers to learn that the "United College" of the oldest University in Scotland is in difficulties. The University of St. Andrews is composed of two Colleges, viz., the United College, comprising the Faculties of Arts and Medicine, and St. Mary's College, consisting of the Faculty of Divinity. Both Colleges derive their revenues, to a large extent, from college lands, and it so happens that the United College has been particularly unfortunate for some years past in the letting and management of its farms. What with bad seasons, insolvent tenants, and unoccupied farms, the United College is said to be financially in a critical position. The story is soon told. For several years past the United College has been suffering from the general agricultural depression which has overtaken the country, and, in spite of every effort to the contrary, has contracted debts which it appears must be paid out of the already too slender incomes of the professors. In order to meet existing liabilities, the salaries of the professors of the United College, at no time large, will, we are given to understand, be reduced in some cases by more than half, for several years to come. The blow will fall heavily on the

Medical chairs, the entire emoluments of which, it is computed, will not exceed from £130 to £200 per annum till the debts are liquidated. The Arts chairs will also suffer largely, as it is calculated the salaries of those chairs for several years will in few cases exceed, if they actually reach, £250 per annum. The liabilities of the United College, although large to the individual professors, are as nothing to the multitude of those who have the interest of the institution at heart; and now that the facts are made known it is to be hoped that the arts and medical graduates of St. Andrews, and the professions generally, will come to the rescue. Donations to the extent of a few thousand pounds would do much to relieve the United College of its present pecuniary embarrassment, and it will be a matter for surprise if the principal College of the oldest northern University be permitted to go to the wall for want of a little timely assistance. It is difficult to understand how, in a wealthy country like Britain, a body of learned and illustrious professors in an old and famous University, whose foundation dates back nearly five centuries, should (under any circumstances) be required to live upon salaries in many cases smaller than those received by ordinary clerks.

PRESENT ROLL OF THE ROYAL COLLEGE OF PHYSICIANS.

The President of the Royal College of Physicians of London, when laying down his office on Monday last, just before his re-election, gave a short address on the condition of the College, and its history during the past year. On the latter topic there was not much to be said, the most important events having been the revision of the regulations for candidates for the College licence, and the action taken by the College in initiating the movement for the holding of an International Medical Congress in England in 1881. During the year 12 Fellows had been added to the roll of the College, 10 Members, and 90 Licentiates; while 11 Fellows, 12 Members, and 37 Licentiates had been removed from it by death. There are now 2220 names on the roll, viz., 308 Fellows, 469 Members, and 1316 Licentiates, together with a few Licentiates admitted before December, 1860, and the Extra-Licentiates. The proportion of Fellows to Members is greater than at any former period in the history of the College.

VITAL STATISTICS OF THE PAST YEAR.

Accompanying the return of the Registrar-General for the last quarter of the year 1879 will be found a brief summary for the whole of that year. From this we gather that in the United Kingdom 1,144,571 births and 707,379 deaths were registered during the period—equal to rates of 33·5 and 20·7 per 1000 respectively of the population estimated to be living in the middle of the year. The *natural* increase of population, by excess of births over deaths, was 437,192, against 436,360 in 1878. In England and Wales during the past year the birth-rate was equal to 35·1, and the death-rate to 21 per 1000 persons living. The birth-rate was 0·6, and the death-rate 0·8 below the average rate in the ten preceding years. The death-rate in 1879 was also 0·7 below that which prevailed in 1878, but somewhat exceeded the rate in 1877, which was the lowest on record. The annual death-rate in England and Wales averaged 22·4, 22·2, and 22·4 per 1000 respectively during the three decades 1841-50, 1851-60, and 1861-70. Notwithstanding the marked increase of density of population in urban districts, English mortality may be said to have remained stationary during the thirty years 1841-70. Last year was the ninth of the current decade 1871-80, during which the average annual death-rate in England and Wales has not exceeded 21·6 per 1000. This decline of mortality, which, the summary says, may be accepted as evidence of improving sanitary condition, implies that during the past nine years more than 150,000 persons have survived in England and Wales, whose deaths would have been recorded had the average annual rate of mortality in the previous thirty years been maintained. The deaths from the seven principal zymotic diseases in England and Wales during the year 1879 were 60,157, and were equal to an annual rate of 2·39 per 1000, against 3·44, 3·11, 2·71, and 3·32 in the four preceding years. Compared with the numbers in 1878, the fatal cases of measles showed a slight increase, whereas those of each of the six other diseases had considerably declined. The decrease of deaths referred to diarrhœa and small-pox was specially marked; the fatal cases of small-pox were, without a single exception, considerably fewer than those returned in any previous year since the establishment of civil registration in 1837. The death-rate from fever (principally enteric), which was equal to 1·11 per 1000 in 1865, has since declined with but slight fluctuations, and in 1879 did not exceed 0·30. In the past nine years the annual death-rate from fever has averaged but 0·51 per 1000 against 0·91 and 0·88 in the two preceding decades—a very satisfactory sign of sanitary progress.

PROFESSOR LEONE LEVI ON THE ENGLISH CHARACTER.

At a recent meeting of the Statistical Society, Professor Leone Levi, LL.D., read a paper entitled "A Survey of Indictable and Summary Jurisdiction Offences in England and Wales from 1857 to 1878." The Professor showed that the last twenty-two years had been, on the whole, favourable to the economic condition of the people, and the leading operating causes of crime had been less intense than in former years. It is gratifying, he says, to note that treason does not exist in England, that the blackest crimes are diminishing, and that the aspect of society is, on the whole, brighter now than it was a quarter of a century ago. Disobedience to law, regardlessness of public order and decorum, immoderate desires of property, exist indeed largely, but there is more respect for the person and for the administration of justice. The desiderata in the English character are summed up by the Professor as more sobriety of deportment, more seriousness of conduct, more thrift of resources, and, above all, a greater sense of personal responsibility.

THE INTERNATIONAL CONGRESS, 1881.

The Universities, Corporations, learned Societies, and other bodies requested by the Presidents of the English Royal College of Physicians and Surgeons to send delegates to a conference on the subject of holding an International Medical Congress in England in the year 1881, have all cordially entertained the proposal, and appointed their several delegates. These gentlemen will meet together on the 30th inst., and it is hoped that a thoroughly representative Executive Committee will then be appointed to determine on the steps to be taken to insure the full success of the proposed Congress.

A NEW STUDY OF "VITAL STATISTICS."

Surgeon-General T. Graham Balfour, F.R.S.—always intimately connected with vital statistics of one sort or another—has recently been turning his attention to the "vital statistics of cavalry horses," and at the last monthly meeting of the Statistical Society he read a paper on this subject. It is surprising to learn from this, that in a horse-loving country like our own the subject has received much less attention than in France; in fact, the information to be obtained respecting British cavalry horses is very meagre. On the other hand, in France, since the year 1847, twenty volumes of annual statistics had been published prior to the

breaking out of the Franco-German war; and, taking into consideration the valuable results obtained by the statistical method of investigation as applied to the horses of the French Army, Dr. Balfour suggests that a similar course should be followed in our service, more especially with a view to test the actual value, as a measure of efficiency and economy, of the introduction into our cavalry of horses imported from Hungary.

THE ASSOCIATION OF SURGEONS PRACTISING DENTAL SURGERY, AND THE DENTISTS ACT.

We understand that the following memorial has just been presented to the Executive Committee of the General Medical Council by the Association of Surgeons Practising Dental Surgery:—

To the President and Council of the General Medical Council.

The Association of Surgeons Practising Dental Surgery beg respectfully to ask your consideration of the Dentists Act of 1878 with a view to its amendment or repeal. We do so more especially at this time as there are Medical Amendment Acts before Parliament.

We beg to point out that, as indicated in the preamble of the Act, it was intended to make provision for the registration of persons "specially qualified to practise as dentists." That this result has not been obtained may be inferred from the fact that more than 5000 persons have been registered as dentists, whilst the highest estimate formed by those who were interested in the passing of the Dentists Act was, that not more than 2000 persons could be registered in Great Britain and Ireland to practise dentistry. There can therefore be no doubt that a very large proportion of the persons registered do not possess the qualifications indicated in the preamble of the Act, and therefore that the registration is deceptive.

This result is due to the wording of Clause 6 of the Dentists Act, in which it is stated that "any person who (c) is at the passing of this Act *bonâ fide* engaged in the practice of dentistry or dental surgery, etc., shall be entitled to be registered under this Act." No interpretation of the terms "dentistry or dental surgery" having been given, each person claiming registration has interpreted these words after his own fashion, and consequently many persons have been placed on the Dentists' Register without any claim to be "specially qualified."

It is quite true that the General Medical Council by Clause 13 can "cause to be erased from the Dentists' Register any entry which has been incorrectly or fraudulently made"; but until the words alluded to in the preceding section are clearly interpreted, it will be impossible for the General Medical Council to remove the names of persons who may be felt not to be "specially qualified" as dentists.

Even if the General Medical Council could act under this clause, the delay and difficulties in carrying into operation the action of the clause are so great that much harm will be done before the desired result can be obtained:—For example, the Council of the Royal College of Surgeons in Ireland have represented to the General Medical Council that the name of a certain individual has been removed from the register of dental licentiates of that College on account of his "admitted unprofessional conduct"; yet, such are the arrangements by which this case can be brought before the General Medical Council and finally settled, that it may occupy more than a year from the present date, the name of such person remaining all the time on the Dentists' Register.

From this it may be seen that a large and important body like the General Medical Council, meeting at rare intervals, and having special and important business of its own to attend to, is not that best qualified to undertake the duties assigned to it by the Dentists Act.

That such was felt to be the case is made manifest by a reference to the Lord President's original Bill (1878), in which, by Clause 23, the power was given to the General Medical Council to frame "a scheme for the examination, licensing, and registration of dentists; and such scheme, when approved by the Privy Council, shall have effect as part of this Act, subject to being from time to time revoked, altered, and added to by a subsequent scheme submitted by the General Medical Council to, and approved by, the Privy Council." Under this clause it would have been possible for the General Medical Council to have established a board, the regulations of which, under the control of the Privy Council, would have had all the force of the clauses of an Act of Parliament, yet which could be modified according to circumstances.

This was evidently the object the General Medical Council had in view when it passed a resolution on July 4, 1878, to the effect "that the Council desires to express its wish that the Bill entitled the Dental Practitioners Bill be brought into conformity with the dental clauses of the Lord President's Bill." This recommendation of the General Medical Council has been disregarded, and instead of the Council being authorised to frame a scheme as above shown, the whole work of carrying the Act into operation has been thrown upon the Council itself, which has thereby been made an executive, and not a legislative, body.

Lastly, the Dentists Act enables certain doctors of dentistry to be registered, who can thus use the title of "Doctor," a proceeding which will render it *impossible* to carry into effective operation Clause 24 relating to unregistered persons in the Medical Act (1858) Amendment Bill (1879) of the Lord President, whereas also the Act does not prohibit persons from assuming the title of surgeon in conjunction with that of dentist by those who do not possess any surgical qualification whatever.

We, therefore, earnestly pray that the General Medical Council will be moved to take such measures with reference to the Medical Amendment Act now before Parliament as will secure a due interpretation of the terms "engaged in the practice of dentistry or dental surgery," made use of in the Dentists Act, Clause 6.

That they will also be pleased to cause to be introduced in Clause 24, line 37, in the Lord President's Bill, after "takes or uses," the words, *either alone or conjunctively with any other word or words*, "the designation," etc.

Finally, to consider whether it will be for the convenience of the Medical Council and for the interests of dentists that Clause 23 of the original Bill of the Lord President should not be made law, and the Dentists Act either repealed or modified accordingly.

Believing that such modifications are absolutely necessary, we earnestly and respectfully request the serious attention of your Council.

Académie de Médecine.—For the vacant place in the Section of Surgical Pathology the candidates were presented to the Academy by the Section in the following order:—1, M. Gaugot; 2, M. Cusco; 3, M. Lannelongue; 4, M. Terrier; and 5, MM. Léon Labbé and Péan. The Academy, disregarding the order proposed, elected M. Léon Labbé by forty-seven votes of the eighty-eight academicians present, the next highest number being thirty-eight for M. Cusco, M. Gaugot only receiving eight votes.

FROM ABROAD.

Psoriasis.

In a lecture delivered at the Woman's Medical College, Chicago (*New York Med. Record*, December 13), Prof. Maynard having before him a case of psoriasis exhibiting admirably the different phases of the affection, drew the attention of his class to some of the points of importance in its diagnosis The disease always commences with small reddish spots that are immediately covered over with whitish scales; and accordingly as these spots assume different forms they have received different names—as psoriasis guttata, nummularis, diffusa, etc. By scraping the pearly or whitish scales which cover these patches, and which are very easily detached, we obtain a view of a bright red or hyperæmic base, upon which a number of minute bleeding points have sprung up. This is so characteristic an appearance of the disease that it can always be relied upon as an aid to diagnosis when there is any doubt. The eruption, too, is usually found most diffused and best defined on the extensor surfaces of the limbs, so that the elbows and knees are often the only parts attacked. The eruption of psoriasis also is always dry, no exudation existing as in eczema. There is more or less itching, but it is at times so slight as not to cause any discomfort. Occasionally, psoriasis, which is usually easily recognised, assumes in its later stage an appearance closely resembling ringworm. In this, however, the scales are not so thick and bulky as in psoriasis, and are more branny, and of a greyish colour. In ringworm, too, there is no tendency to symmetry in the eruption, and there is a history of contagion; the microscope also detects the mycelium and spores of a vegetable parasite, which never exists in psoriasis. Sometimes there are found chronic patches of eczema that have much resemblance to those of psoriasis; but on examination it will be found that the itching from them is much more intense and constant; that in most cases there has at some time been exudation; that the scales are much more firm and tenacious; and that the borders of the patches are not so well defined as in psoriasis, having a tendency to shade away into the surrounding skin. Occasionally, syphilitic psoriasis bears so close a resemblance to the non-specific form that much care and experience is required for the diagnosis, which is of great importance as regards treatment. In the syphilitic form, the spots instead of being of a bright red are of a dark red or purplish colour, and are only covered partially with thin branny scales, which, on account of their tendency to rapidly exfoliate, leave the base quite exposed. In this variety the elbows and knees are not necessarily affected, the eruption occurring on any part of the body without regard to symmetry in development. Patches of psoriasis that exist solely upon the palms of the hands are, in Prof. Maynard's opinion, invariably syphilitic.

Although strongly disposed, when treating skin diseases, to search out for internal conditions which may have acted as causative or modifying influences, Prof. Maynard states that, with respect to psoriasis, he has generally failed in detecting these; and he is no believer in its strumous, dartrous, or gouty origin, advocated by some theorists. He is of opinion that to a certain extent the skin possesses a sufficient amount of inherent independence to carry on special pathological changes without the co-existence of other functional disturbances, and that there are also diseases of the skin which are essentially local in their nature and are cured by local treatment. Psoriasis may be regarded as one of these, being a simple hyperæmia of certain portions of the skin, including the upper layers of the corium, and accompanied by a manifest proliferation of dried epithelial cells. This being so, there is no indication for internal treatment, local remedies sufficing in many cases. Still, Dr. Maynard very frequently prescribes arsenic, believing it to be an excellent adjunct to external remedies. He does not agree with the general opinion that arsenic is a sovereign remedy in skin diseases, in few of which, indeed, is it very beneficial. It is given in psoriasis as a simple tonic, which, during its elimination through the skin, plays the part of a cutaneous irritant, stimulating the process of repair. That it acts as a stimulant to the rete, and even as an irritant to these cutaneous cells, is shown by the fact that acute psoriasis, or other acute disease of the skin, is invariably made worse by its employment, while the more sluggish and indolent the disease, the more rapid is the improvement under its use. It should always be begun with in small doses—generally three or four minims of Fowler's solution diluted in water,—giving it quite regularly three times a day after meals. The arsenic may have to be continued perhaps for months, and it is rarely necessary to increase the dose, which indeed, small as it is, may give rise to swelling and itching of the eyelids, pains in the head, gastric disturbance, etc. When this is the case, the dose must be diminished or the medicine suspended. As to local treatment, where the eruption is of recent date, and running an acute course, soothing applications must be used. In these cases there is a constant exfoliation of scales which must be first removed by plain or alkaline baths, a very good one being made by dissolving a pound each of borax and bicarbonate of soda in thirty gallons of water. After the bath the patient should be anointed with cosmoline or vaseline, and this treatment should be continued until the eruption fades away or becomes sufficiently chronic to allow more stimulant applications.

In the chronic stage, Prof. Maynard thinks highly of chrysophanic acid, fifteen grains to the ounce of lard. It should be applied with great care only to the patches of the eruption, as in some it produces great irritation of the skin. An objection to its use is the peculiar staining of the skin which it produces; and on this account it is best to employ it on parts covered by the clothing, substituting for it on the face and hands the sapo viridis, or German green soap, which may be used alone, or, if found too irritating, with one or two parts of alcohol. Pyrogallic acid (in a 10 per cent. solution in water) has been recommended as a substitute when the chrysophanic acid cannot be tolerated, being much slower and milder in its action. Liquid pitch, or oleum cadini, may also be used with good effect, either as ointment with lard or cosmoline, or in lotions with alcohol or eau-de-cologne. Usually the disease will yield to these means, but occasionally it proves very obstinate and very liable to relapse, especially in winter. In such cases the arsenic treatment should be continued for several months after the subsidence of the eruption. "From these personal investigations, then, I am led to the belief that psoriasis, in a majority of instances, is purely a local disease, that it is often removed by local means alone, and that arsenic is curative only as it acts in conjunction with the local treatment. I am a warm advocate of the influence of functional disturbances in their relation to skin diseases. . . . . While claiming the local origin of psoriasis, it is but just to say that my opinions are not in accordance with those of many dermatologists, and that a majority, perhaps, will favour its constitutional origin."

Suicides in Denmark.—According to official documents recently issued in Copenhagen the number of suicides in Denmark for the ten years 1869-78 amounts to 4770—viz., 3709 males and 1061 females. Of these, 58 individuals were less than fifteen years of age; 208 between fifteen and twenty; 549 between twenty and thirty; 617 between thirty and forty; 1153 between fifty and sixty; 818 between sixty and seventy; and 405 above seventy. As to the mode of death, 3714 persons hanged themselves, 754 drowned themselves, 154 employed firearms, and 80 poignards; only 48 (25 being women) took poison. The mode of death in 20 instances is not specified. The number of suicides increases from December till May, and rapidly diminishes duri summer and autumn.—*Union Méd.*, March 6.

A Colossal Prescription.—A practitioner sent for from Châlons to a neighbouring commune forgot his memorandum-book, and, having seen his patient, asked for a pencil and a piece of paper in order to write a prescription. It seems that this village not having partaken of the benefits of compulsory education, these articles were long in being sought for. The doctor, tired of waiting, wrote his prescription on the door of a barn with some charcoal, and left. The relatives of the patient being puzzled with his writing (which is perhaps not surprising), conceived the happy idea of unhinging the door and sending it to the *pharmacien*. There it duly arrived in a cart, and the prescription having been perused from the pavement, was duly dispensed.—*Union Méd.*, March 13.

REVIEWS.

The Student's Guide to Surgical Anatomy: a Description of the more Important Surgical Regions of the Human Body, and an Introduction to Operative Surgery. By Edward Bellamy, F.R.C.S., Surgeon to Charing-cross Hospital, etc. Second Edition. London: J. and A. Churchill. Pp. 317.

Mr. Bellamy's "Student's Guide to Surgical Anatomy" is well known to the profession. In the second edition, although the general arrangement is the same, the author has considerably modified many of the details, adding a fuller description of clinical facts and re-arranging some parts of the book. Some of the old illustrations have been omitted, and a large number of excellent woodcuts have been added which materially increase the value of the volume. The number of pages is not much greater than in the previous edition.

In order to remind our readers of the plan Mr. Bellamy has adopted we may say that in each chapter he treats of a particular parts of the body, and each chapter is again subdivided into sections which deal with the regions into which the various part may conveniently be broken up. Thus the chapters, six in number, are devoted to the head, the neck, the upper extremity, the lower extremity, the thorax, and the abdomen; while the sub-sections include such regions as the subclavian, the lumbar, the nasal, and so on. The surface markings, topographical anatomy, and facts of clinical interest in each region, are clearly and methodically described. It will thus be gathered that a large amount of information—useful quite as much to the practitioner as to the student—is contained in this manual, while to both classes of readers its conciseness and brevity will be highly appreciated.

The reader will notice that Mr. Bellamy has devoted special care to the arrangement of fasciæ, the importance of which is often lost sight of, although they exert, as is well known, a very powerful influence upon the burrowing of matter and the development underlying tumours.

Topographical anatomy is a subject that is too much neglected in our English medical course, and if Mr. Bellamy should, as he suggests in his preface, produce a larger work on the subject, he would no doubt be filling up a gap, which needs filling, in English literature.

Cancer of the Rectum: its Pathology, Diagnosis, and Treatment; including a portion of the Jacksonian Prize Essay for 1876. By W. Harrison Cripps, F.R.C.S. Eng., Surgeon to the Great Northern Hospital; Surgical Registrar, St. Bartholomew's Hospital; late Assistant-Demonstrator of Anatomy, St. Bartholomew's Medical School. 8vo, pp. 191. London: J. and A. Churchill. 1880.

The subject of the Jacksonian Essay for 1876 was confined exclusively to the treatment of rectal cancer; but Mr. Harrison Cripps has given much time to the study of the minute anatomy of the disease, and has had opportunities of enlarging his knowledge of its diagnosis and treatment since 1876. He has, therefore, instead of simply publishing his Prize Essay on the subject, wisely enlarged the scope of it, and given us the work now before us. The introduction, in which the views as to the local or constitutional origin of cancer are discussed, is remarkable for its lucid style and masterly grasp of the subject. After a careful consideration of the question of heredity, the author refers to the cases in which malignant disease follows injuries, but in neither instance does he find sufficient evidence to justify the view that the disease is constitutional in its origin. As to pathology, he regards the various forms of malignant disease of the rectum (excepting colloid) as belonging to one main type—the cylindrical epithelioma. Of this we venture to think that he has not brought forward sufficient evidence, nor can we see ground for his view that the nuclei of the epithelial cells are identical with the lymph-cells seen in the reticulum, or that the fibrous stroma is formed from the epithelial cells. Nevertheless, the chapter on pathology is very interesting and suggestive, and will well repay the reader. It shows a great amount of hard, honest work; and the eleven pages of plates of microscopical details are very clear and good.

The chapter on diagnosis seems to us deficient in details, more especially as regards the differential diagnosis from syphilitic disease—a point oftentimes very difficult. That on Treatment is the most interesting, and, together with the table of cases at the end, will be of considerable value to the surgeon, though on one point—viz., the value of and indications for colotomy as a palliative—a little more information would be desirable.

On the whole, this work, though rather deficient in information in some important particulars, is carefully written, and will no doubt be of value to surgeons in encouraging them to deal more often than has hitherto been the case with this unfavourable and distressing class of diseases.

Chirurgie Antiseptique. Par le Dr. Just Lucas-Championnière, Chirurgien de la Maternité de l'Hôpital Cochin, etc. Paris: J. B. Baillière et Fils. 1880.

Antiseptic Surgery. By Dr. Just Lucas-Championnière, Maternity Surgeon to the Cochin Hospital, etc.

This work consists of a description of the Listerian treatment of wounds, and of a short epitome of the alterations produced in the surgical treatment of disease by the introduction of the antiseptic method.

In the introduction the author refers shortly to the general results obtained by the use of this method, and he points out that by its means "the accidents which so often follow wounds have disappeared even in the worst surroundings, and that wounds unite by first intention with a regularity unknown till the introduction of this system." After dwelling on the necessity of observing rigorously all the precautions to be afterwards mentioned, he writes—"J'écris aujourd'hui la nouvelle édition de ce livre avec une expérience personelle bien autre qu'il y a quatre ans. Tout ce que j'affirme je l'ai expérimenté et observé."

After a short note on the History of Antiseptic Surgery, in which, strange to say, Lemaire's name is not mentioned, the author proceeds to the discussion of the principles on which the Listerian method is constructed. These he groups into three classes—the avoidance of tension; the avoidance of direct irritation of the living tissues and of the presence of a foreign body; the exclusion of organisms. In treating of the first two principles the author follows Mr. Lister's teaching very accurately, but when he comes to the last he falls into more than one error. Thus he assigns to these organisms a double action—"they not only provoke the formation of pus, but they also cause that pus to putrefy." Such an assertion in a work which professes to be a *résumé* of Mr. Lister's views is scarcely pardonable, and if Dr. Championnière will refer to Mr. Lister's writings he will find it stated that it is by causing putrefaction of the discharges in the first instance that these organisms induce suppuration. Mr. Lister nowhere states that they can cause suppuration without a preceding putrefaction. Fortunately for the general good character of the work, Dr. Championnière devotes only a very short space to this part of the subject.

In Chapter III. a detailed description is given of the method of carrying out these principles. This deals, in the first place, with the precautions necessary to prevent the access of living organisms before, during, and after an operation. The description of this part of the subject is clear, complete, and, with one exception, thoroughly accurate. This error is one introduced from the former edition, and consists in a recommendation to wash the wound thoroughly with carbolic lotion (one in twenty) before stitching it up. Such a procedure is, of course, quite unnecessary, and may seriously interfere with the healing of the wound; nevertheless, the same mistake is repeated in the description of herniotomy and of the method of treating abscesses. The second part of this chapter deals with the question of drainage and of union of the margins of the wound.

After a few words about the uses of catgut and the various forms of spray apparatus, the author goes on to state some of the results already obtained. Several illustrative cases are recorded, the statistics of Lister, Saxtorph, Volkmann, and Guyon are referred to, and then mention is made of his own success in the following terms: "I have not had a single instance of complication in the progress of cases after operations or of injuries treated antiseptically. I have seen neither erysipelas nor purulent infection, and that although

I have performed operations which have not been previously attempted in France."

In the second part of this work the author deals with the various operations in detail, and indicates how far the usual method of treating various diseases may be modified by the employment of strict antiseptic measures. This subject is illustrated by cases which have occurred either in the author's practice or in that of others who use strict Listerian methods. Its perusal will be of the greatest value to anyone who wishes to study the revolution in surgical ideas which has been brought about by the introduction of this method.

The work ends with a discussion of the objections which have been urged against the antiseptic method, and a description of the modes of preparation of the various substances employed.

On the whole we heartily congratulate Dr. Championnière on the production of this revised edition of his work. It contains nothing original—indeed, it does not pretend to do so—but it furnishes a fair and tolerably complete summary of the precautions necessary in carrying out the antiseptic method; and although in some parts more detailed instructions might have been given with advantage—as, for instance, n the modes of applying the dressings in various situations —yet we have no hesitation in recommending it to the notice of the profession as a thoroughly satisfactory guide to antiseptic treatment. If the precautions narrated be faithfully carried out, and if the principles laid down be acted on, similar successes ought to be attainable by any surgeon.

GENERAL CORRESPONDENCE.

RETENTION OF COINS IN THE INTESTINES.

Letter from Dr. H. J. Jones.

[To the Editor of the Medical Times and Gazette.]

Sir,—On January 3 I was called to see Mr. K., then suffering from bronchitis, and out of work. A charitable lady had given him two half-crowns; he put them in his mouth, saying to his wife, in joke, "They will be safe there." A violent fit of coughing came on, and he swallowed them. On January 18 the two half-crowns passed from the rectum, together, without difficulty, having caused no bad symptoms during the fifteen days they remained in the intestines. As the bowels were very confined I told the man to take a small dose of castor-oil now and then. I venture to send you this case, thinking the large size of the foreign bodies swallowed, and the length of time they took in passing through the digestive tract, may be of some interest. I am, &c., Hermann J. Jones, M.D.

53, Blenheim-crescent, W., February 21.

RECURRING PLACENTAL ADHESIONS.

Letter from Dr. O. Fehrsen.

[To the Editor of the Medical Times and Gazette.]

Sir,—During the last five years I have attended two ladies, each in three successive confinements. On each occasion there was extensive adhesion of the placenta, requiring its careful removal under chloroform. The parties are not related. Have any of your readers met with similar cases, and what have they found the most successful preventive treatment? I am, &c.,

O. Fehrsen, M.D. Edin., M.R.C.S.

Cradock, Cape of Good Hope, January.

HUMAN PHYSIOLOGY FOR SCHOOL-CHILDREN.

Letter from Mr. E. Playter.

[To the Editor of the Medical Times and Gazette.]

Sir,—Will you be good enough to give me space in the *Medical Times and Gazette* to make a few remarks on the subject of teaching the masses of the people, especially school-children, the elements of human physiology. Some implied objections to a general knowledge on this highly interesting and important branch of science, which appeared in a brief review of a little book of mine on Physiology and Hygiene, in the *Medical Times and Gazette* of December 10, induces me to ask this favour. Please observe, I have no wish to say a word in reply to the review proper, unless it is to thank you for your kindly notice of my imperfect little work; but, as it were aside from the notice of the book, your reviewer says, "'A little knowledge is a dangerous thing,' and this applies most forcibly to a partial study of the medical sciences; it is too apt either to create a morbid feeling of anxiety under the most trivial circumstances, or to engender misplaced and unreasoning confidence under grave conditions. In both cases the medical practitioner (unnecessarily summoned in the first, dangerously kept at a distance in the last) will find his patient more difficult to treat than if he had never acquired this smattering of knowledge."

I too believe that a "little knowledge," when attempts are made to carry it into practice, is very liable to prove a most "dangerous thing"; and in nothing perhaps will a little knowledge prove more dangerous than that concerning the treatment or cure of disease. And I have always strongly opposed any attempts to place any of this dangerous thing, as it relates to curing diseases, in the hands of the public. But I cannot see how a knowledge of the elements of physiology (with the anatomy necessarily accompanying it) can have the effect referred to in the *Medical Times and Gazette*, as above. Has experience proved it? I am convinced that the more men become acquainted with the structure and functions of their own organism, the more they will fear, shun, and despise ignorant pretenders in the healing art; the more they will hesitate to try upon the body the effects of medicines and remedies with which they have no acquaintance whatever: and that we have here, therefore, the best means of protecting both the public and the profession against quackery. Furthermore, as the engineer, in order to work and preserve his engine, must know something about its construction and actions, so it seems essential that man, in order to make the best use of his body and preserve it, must know something about its structure and functions. To be sure, men might, if they would, perhaps carry out blindly the laws of health without a knowledge of physiology; but most of us in this age want to know the "why and the wherefore" of things. It is not usually enough to know that health will follow the carrying out of such laws; most of us want to know why and how health follows such a course. Many children even desire to know, and it is desirable they should know, in what way the air is fouled by respiration, and how impurities in the air get into the blood; why it is best to eat slowly of digestible food, and to masticate it thoroughly; and why it is bad to take violent exercise just before or after a full meal. To derive the greatest amount of benefit from exercise, it appears necessary to know something about the construction and action of the muscles, and the effects of exercise upon the circulation and respiration. With a view to perfect cleanliness of body, it is desirable for everyone to know something about the structure and functions of the skin. Finally, as a part of even an ordinary education, it seems just as necessary or desirable for one to know something about the human body —the "noblest work of God"—as about the steam-engine, the printing-press, or the electric telegraph.

I think it is to be much regretted if a medical journal in such standing as the *Medical Times and Gazette* cannot rather encourage than oppose the teaching of elementary physiology in schools. I am, &c.,

Toronto, Canada, January 25. Edward Playter.

Progress of Population of France in 1878.—According to the returns for the year 1878 (which are the last published), there were born, as issue of wedlock, 444,316 male and 424,983 female infants, and 35,032 male and 32,880 female illegitimate infants—therefore in all 937,211 children, without counting 43,251 stillborn infants. The deaths amounted to 839,036—viz., 432,867 males and 406,169 females. In sixty-one departments there was an excess of 119,315 births, and in the twenty-six others an excess of 21,140 deaths, making a general increase of 98,175 in the population. This is an extremely unfavourable rate of increase. The increase was 172,936 in 1872; 101,776 in 1873; 172,943 in 1874; 105,913 in 1875; 132,608 in 1876; and 142,662 in 1877. "With the present slow rate in the increase of our population," the *Revue Scientifique* observes, "we shall take nearly 400 years to double our population."

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, MARCH 3.

W. S. PLAYFAIR, M.D., F.R.C.P., President, in the Chair.

(*Concluded from page* 333.)

ON AXIAL ROTATION OF OVARIAN TUMOURS, LEADING TO THEIR STRANGULATION AND GANGRENE.

MR. LAWSON TAIT read a paper on this subject, in which he recounted the particulars of three cases that were successfully treated by the performance of immediate ovariotomy. The first case of the kind which the author had met with was that of a woman aged forty-eight, on whom he had operated for a femoral hernia, supposed to have been strangulated for two days. The patient died in five days. The autopsy revealed a small ovarian tumour, not recognised during life. It was black and gangrenous from twisting of the pedicle. Of the three cases now recorded, the first was that of a woman forty-six years old. In March last the author diagnosed a small monocystic tumour, probably parovarian. On June 9 she returned with the tumour much enlarged, and suffering from intense abdominal pain. Immediate ovariotomy being performed, the author found the cyst of a black pearly colour, universally adherent by recent lymph. The pedicle was twisted three or four times. The patient made an uninterrupted recovery, though no Listerian precautions were used. The second case was that of a woman, aged thirty, who had noticed gradual increase of size for nine months. Sudden and violent pain in the abdomen occurred on November 6, followed by incessant sickness. Ovariotomy was performed on November 12, with Listerian precautions. The tumour was dark purple, friable, and universally adherent by recent adhesions. Bleeding was controlled by the application of solid perchloride of iron. The pedicle was twisted twice. The patient survived, but made anything but an antiseptic recovery. The third case was that of a woman, aged thirty-six, who had not menstruated for seventeen weeks, but had noticed an increase of size too rapid for ordinary pregnancy. Intense abdominal pain, followed by sickness, came on on November 11. Immediate ovariotomy was performed. The uterus was found occupied by a pregnancy of about the fourth month. The tumour was a parovarian cyst of the right side, and was of a pearly black lustre, and the pedicle was twisted three times. Listerian precautions were used, and the patient made a better recovery than the second case, but not so good as the first. No symptoms of miscarriage appeared. In all these three cases the tumour was one of the right side, and the pedicle was twisted from within outwards and to the right side. From this circumstance the author deduced a theory as to the causation of the rotation—namely, that it is due to the alternate filling and emptying of the rectum. The fæces descending the rectum would act as a wedge, and the point of application of the force would be the most favourable possible in the case of a right-side tumour.

MR. KNOWSLEY THORNTON related several cases in which, in performing ovariotomy, he had found the tumour gangrenous from twisting of the pedicle. He agreed with the author that immediate ovariotomy should be performed when symptoms arose leading to a suspicion of such a condition. In some cases, however, the necrosed tumour, being excluded from septic influence, remained quiescent for a considerable time.

MR. SPENCER WELLS thought that it was easy to account for the rotation of the tumour by the patient's changes of position. Moderate degrees of twisting were often found without any gangrene being produced. He had seen two patients who died suddenly from very large bleeding within the cyst, without its rupture, the pedicles being found twisted. Last year he had removed by ovariotomy a cyst, necrosed from twisting of the pedicle, which had been supposed malignant on account of the pallor of the patient. The woman recovered perfectly.

DR. BANTOCK had recently met with two cases in which small tumours were found with twisted pedicles. Both tumours were found adherent; and both patients had been attacked by sudden pain, followed by symptoms of peritonitis. He thought that the twisting produced no symptoms, but that the rupture of a bloodvessel was indicated by an attack of pain.

DR. HEYWOOD SMITH thought that not only should ovariotomy be performed immediately if strangulation of an ovarian tumour were diagnosed, but that—given an ovarian tumour—this should be done should pain suddenly intervene at all. The same theory as to the cause of rotation as Mr. Lawson Tait's had occurred to himself while the paper was being read.

MR. ALBAN DORAN said that Mr. Tait's theory with regard to the causes of torsion accorded with his own conviction, grounded on experiments made in the post-mortem room. Whether the torsion was progressive or not would depend on the length and elasticity of the pedicle.

MR. LAWSON TAIT, in reply, said that he hoped that Mr. Thornton and Mr. Wells would publish their cases, with specific details. The rotation could not be accidental, as held by Mr. Wells, if the great majority of the tumours twisted were right-sided tumours, and the twist in a specific direction.

REFUTATION OF A SUPPOSED CASE OF DELIVERY OF A LIVING FŒTUS AFTER DEATH FROM BURNING.

A paper, by Dr. ROBERT P. HARRIS (Philadelphia), entitled "A Complete and Authoritative Refutation of the Marvellous Account given by Professor Claude M. Gardieu, of Paris, in 1816, to the effect that the Princess Pauline de Schwartzenberg was delivered of a living fœtus some hours after she was burned to death," was read. The author said the story told by Professor Gardieu was that the Princess perished from the effects of burns received at a fête given in the house of the Austrian Ambassador, her brother-in-law, on July 1, 1810; that she was pregnant, and the infant was found alive, although she was not opened until the day after the accident. From research among contemporary authorities, the author found that the ball was given in a large temporary wooden building, and the fire broke out soon after dancing commenced. The Princess escaped with others, but rushed back to seek for her daughter, and so perished. In the morning the disfigured remains were recognised as hers by a piece of gold jewellery. Madame Junot writes that "her body, with the exception of her bosom and part of one arm, was burnt to a cinder." The *Court Journal* of July 3, 1810, states that the Princess was *four months* pregnant! No mention is made of the case in the medical journals of the time. This story, therefore, which was repeated by Gardieu in his third edition, quoted by Velpeau, and has attained general notoriety, is absolutely without foundation.

CLINICAL SOCIETY OF LONDON.

FRIDAY, MARCH 12.

E. HEADLAM GREENHOW, M.D., F.R.S., President, in the Chair.

CASE OF IMPACTED FISH-BONE IN THE ŒSOPHAGUS, PENETRATING THE DIAPHRAGM AND PERICARDIUM, AND WOUNDING THE HEART.

MR. FREDERIC S. EVE related the case of a man, aged fifty-nine, who while partly intoxicated ate some fish for supper. The next day he went to the nearest hospital on account of pain in the throat and chest. The house-surgeon passed a dilating horse-hair probang. On leaving the hospital he was extremely faint and ill, and complained of severe pain in his chest. He then took to his bed; the pain in the chest was severe, and he vomited all food. On the third day the pain had slightly diminished. In the evening he got out of bed, stretched himself, and immediately fell back dead. At the post-mortem examination it was found that a lance-shaped fish-bone about two inches long had penetrated the anterior surface of the œsophagus about a quarter of an inch above the cardiac orifice, and transfixed the diaphragm, the sharp extremity projecting through the posterior portion of the pericardium. The opposed surface of the left ventricle was wounded, but not penetrated. The fish-bone was directed obliquely upwards and forwards. The pericardium was distended with blood-stained serum, and contained some blood-clot.

CASE OF TYPHOID FEVER WITH ACUTE NEPHRITIS AND PROFUSE HÆMATURIA WITHOUT DROPSY.

The PRESIDENT communicated notes of this case. A porter, aged twenty-one, was admitted into the Middlesex

Hospital under Dr. Greenhow's care on November 25, 1879, the fifth day of a fever which set in with considerable severity, the second day of the attack being marked by vomiting, cough, and slight sore throat, and in the night he began to have painful micturition, and noticed that his urine was almost black in colour. On admission, pulse 108; temperature 103·2°; urine specific gravity 1012, of a deep red colour from admixture with blood, containing albumen half, numerous blood globules, blood and epithelial casts. He was very prostrate, and suffered from muscular pains; there was impaired resonance with bronchial breathing, and scanty crepitation in the region of the right lung, but no râles elsewhere. The cardiac second sound was reduplicate, the abdomen was tympanitic, and there were tenderness and gurgling in the right iliac fossa. The liver and spleen were not enlarged. There was no diarrhœa nor rose spots. Cold sponging was ordered, and a fluid diet. At 9 p.m. pulse 126, temperature 104·8°. The illness ran a rapid course; prostration increased; the pulse-rate ranged between 100 and 130; the temperature 97·8° to 104·8°. Restlessness and delirium, passing towards the close into somnolence, and occasional subsultus in arms and legs, were observed. The tongue became dry and fissured. The urine continued to be blood-stained, but the amount of blood and albumen diminished. The abdominal distension persisted, and characteristic diarrhœa appeared on the 27th, continuing till death, which took place on December 8, the thirteenth day of his illness. The autopsy revealed mitral thickening and enlargement of the heart; marked pulmonary hypostasis. Two or three sloughing ulcers occurred at the lower end of ileum, and were in the healing stage, Peyer's glands and solitary follicles being elsewhere swollen. Liver and spleen greatly swollen and softened. Kidneys weighed twelve and fourteen ounces respectively, were intensely engorged; their secreting tubules were filled with swollen granular epithelium, and between the tubules there was small-celled infiltration. Dr. Greenhow remarked that he had not met with a similar instance. Albuminuria, when it occurs, is usually a late event in typhoid fever—according to Liebermeister, not until the fever has reached its height; and Murchison says it rarely appears sooner than the third week, and is due either to congestion or to parenchymatous degeneration, not as here to acute nephritis. Dr. Murchison also says that when copious hæmaturia occurs it is generallly associated with other hæmorrhages. The only parallel instance to the present case Dr. Greenhow had found on record was a reference by Liebermeister to two case of uræmia from acute parenchymatous nephritis in the Basle Hospital in 1872, soon after admission, and during the height of an attack of typhoid fever. The most careful inquiry failed to elicit any history of previous disease in the present case; so that it seemed as if the trivial cardiac hypertrophy and mitral thickening were due to the very intense nephritis. The points, then, of chief interest were—the concurrence of typhoid fever with such intense nephritis; the entire absence of dropsy, and the severe and rapid course of the disease.

Dr. Cayley said that such cases were rare. There had been in recent years, in the Fever Hospital, only one case of typhoid complicated with nephritis, and the latter came on during convalescence after the fever. Another case occurred some time ago, when there was profuse hæmaturia, but he had never seen a case so rapid as that described by Dr. Greenhow.

Case of Rapid and almost Universal Paralysis.

Dr. Buzzard brought forward a case of rapid and almost universal paralysis, terminating in complete recovery under treatment. The patient was a man aged forty-four, whose illness had commenced with some drawing of the face to the right, followed shortly afterwards by loss of power and sensation in both upper and lower extremities. On admission into the National Hospital for the Paralysed and Epileptic, Queen-square, he was found to be paralysed on both sides of the face, both external recti muscles, and also to a great extent in all four extremities, in the movements of respiration and deglutition, and in the sphincters. There was anæsthesia to touch and pain in the face (especially on the right side), with apparently increased sensibility to heat and cold. Below the middle of each forearm there was almost entire loss of sensibility to touch and pain, whilst heat and cold were distinctly recognised. The sensibility of the trunk was preserved. There was loss of smell and taste on the left side. Electric excitability (by induced current) was almost absent in the muscles of the face, hands, and lower extremities, and much reduced in the forearms. There was atrophy of the interosseous muscles. Respiration was mainly upper thoracic, the lower part of the chest not expanding, and the movements of the diaphragm being scarcely perceptible. No lesion of the spinal column could be found. The patellar tendon reflex was entirely absent in both knees. Under iodide of potassium at first, and later mercurial inunction, patient began to improve so rapidly that on the next day but one after admission he had regained some power over the external recti muscles, and the sensibility of the face to touch and pain was increased. There was gradual and steady amelioration in all his symptoms, and four months after his admission he returned to his work (tailor's cutting) quite well. The patellar tendon reflex returned about this time in both legs. Twenty years previously to his attack patient had suffered from a chancre, the scar of which remained visible. With the exception of this he declared that he had never had a day's illness. In his remarks Dr. Buzzard compared the case with those first described by Landry, to which the title, "acute ascending paralysis," had been given, which were usually fatal, and in which there were no marked post-mortem changes. The present case differed from this type in the extensive affection of sensibility, in the greatly reduced electrical excitability of the muscular system, and in the implication of ocular muscles. It resembled, however, most strikingly a case brought to this Society by the author in 1874, which presented almost precisely similar symptoms, in which, as in this, there was an old history of syphilis, and which recovered under similar treatment in about the same time. A diffuse myelitis involving the cord, the medulla oblongata, and the pons, might give rise to the symptoms. So also perhaps would a lesion of the intracranial and spinal membranes with effusion compressing the nerves. Was it possible that there might be some thickening of vessels of the pia mater, an endarteritis of syphilitic origin giving rise to disordered circulation? All the cases that Dr. Buzzard had seen recovered, and he could add nothing positive in reference to the pathology of the disease, which was confessedly obscure.

Dr. Althaus inquired as to the condition of the mucous membranes supplied by the fifth nerve, especially as regarded ammonia, sapid substances, and pain on irritation.

Dr. Stephen Mackenzie thought there must have been some lesion of the cord to account for the atrophy. In the case of a girl who had suffered from headache and then vertigo, there was, when she was brought to the London Hospital, complete paralysis and partial insensibility. She was seen by Drs. Ramskill, Sutton, and Hughlings-Jackson. She was livid, and was bled to the extent of thirty ounces, as the symptoms pointed to some mischief about the pons. She was relieved for the time, but died some hours afterwards. No coarse change was found in the centres. Another case occurred about the same time. Paralysis of all the limbs was followed by spasms almost tetanic in their character. The patient died in a few days, and no notable central change could be made out. In these obscure cases it was not easy to decide upon the nature and seat of the lesion.

Dr. Mahomed had seen a case like Dr. Buzzard's some years ago. A young man was taken suddenly ill. He was sick, had hiccup, headache, and vertigo. His lower limbs became more or less paralysed, and he could not distinguish heat from cold. He had suffered from sore throat, and had been treated with anti-syphilitic remedies, and under the renewed use of these he rapidly recovered. But for some time afterwards his sensations were disordered, especially as regarded heat and cold. In the course of the disease the urine passed was intensely offensive; and this not from retention.

Dr. Buzzard, in reply, said the anæsthesia of the face had been complete, but the mucous membranes had not been noted. Was there any history of syphilis in Dr. Mackenzie's cases. In his own case there had been no particular change in the urine.

Dr. Mackenzie said that, as far as he could remember, there was no history of syphilis.

The President had seen a case of severe diphtheritic paralysis, where there was complete loss of power in the limbs, face, and tongue. The case just recorded was essentially similar, but was due to syphilis, and not to diphtheria.

Case of Fracture extending through Temporal Bone.

Mr. Frederic S. Eve communicated the above case. A boy, aged thirteen months, fell off a bed and struck his head

against a mangle. On admission to St. Bartholomew's Hospital he was insensible, vomited, and there was bleeding from the right ear. The next morning there was a profuse discharge of clear watery fluid from the ear, which continued until he died, on the third day after the accident. Post-mortem examination: Lymph was effused in the sub-arachnoid space over the whole surface of the brain, but most abundantly over the right hemisphere. A fracture passed vertically through the squamous portion of the temporal bone and the petrous bone, cutting across the external and internal auditory meatuses, and terminated at the foramen lacerum posterius. A coloured injection thrown into the external auditory meatus passed out through the internal meatus issuing from within the sheath of the nerves, thus demonstrating that the watery discharge in this case was the cerebro-spinal fluid.

Case of Femoral Aneurism—Ligature of the External Iliac Artery—Cure.

Mr. H. Clutton read a paper on the case of a man, aged forty-six, who was admitted into St. Thomas's Hospital on December 9, 1878, with an aneurism of the right femoral artery, of about the size of a walnut, immediately below Poupart's ligament. It had been noticed three or four months. There was no history of syphilis or injury. There was slight arterial degeneration, but no marked affection of the heart. He was placed under the influence of iodide of potassium, and a restricted diet. Every variety of pressure was tried with the exception of the compression of the abdominal aorta, but they all failed. Under these circumstances the external iliac artery was ligatured antiseptically by Mr. Clutton, on January 11, 1879, with a thoroughly carbolised silk ligature, of which the two ends were cut short. A catgut drain was then inserted, and the wound closed with silver sutures. Pulsation in the tibial arteries returned in three days. As the temperature never rose above normal, and there was no oozing, the dressing was not changed for a week; the wound was then found completely closed; pulsation, however, could be felt in the sac. At the end of another week the dressing was removed for the second time, and the wound found soundly and firmly healed. Pulsation in the aneurism, however, continued till February 15 (five weeks after the operation), when he was suddenly seized with pain in the right groin. Shortly afterwards the aneurism was found quite solid, and never again pulsated. But on February 23, exactly six weeks after the operation, there was slight pain and swelling in the wound, and a few days afterwards a thimbleful of sero-purulent fluid was evacuated from the centre of the cicatrix. This little opening continued to discharge only sufficient fluid to keep a scab of about the size of a split pea adherent to the centre of the scar. In this condition he left the hospital on March 15, with the caution carefully to watch for the little loop of silk. On May 22, four months and a half after the operation, he came to the hospital with the silk loop in his hand, and the wound again soundly healed without any scab. Mr. Clutton remarked, that considering the number of silk ligatures which are now often used in a case of ovariotomy in this manner, and the few, if any, that have subsequently appeared by suppuration or otherwise, it did not seem at first sight too much to expect from antiseptics that the silk might become encapsuled in the tissues around the artery as efficiently as has been the case in the peritoneal cavity. In the case under consideration, too, the ligature was not placed amongst the muscles of a limb where a certain amount of movement must take place, but in the abdominal cavity; thus differing only from the ligature of the ovarian pedicle in its position with regard to the peritoneum: in the case of the artery the ligature is the subserous tissue; in the case of the ovarian pedicle the ligature is lying on the endothelial surface of the peritoneum. He thought that in this fact was to be found the explanation of this apparent discrepancy.

Mr. Eve had examined the pedicle of an ovarian tumour a year after the removal of the mass, and found the silk ligature almost entirely gone. The fibres which remained were infiltrated with leucocytes.

Dr. Barclay thought that restricted diet had no influence in the cure of aneurisms. Rest and good diet were the chief measures he relied on.

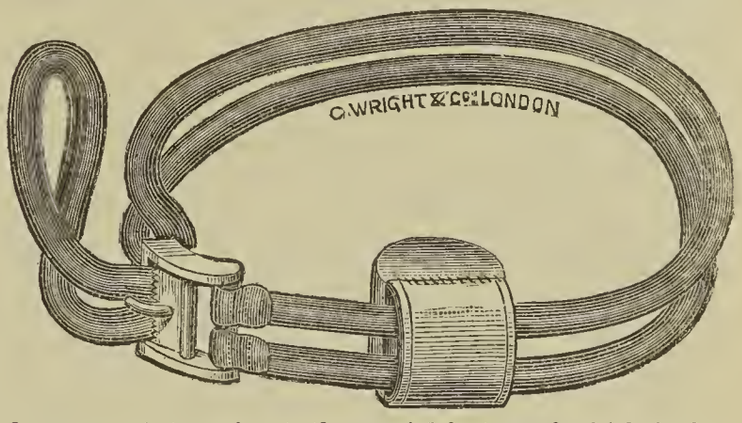
The President said that here Dr. Barclay's views were opposed to those of Mr. Jolliffe Tufnell and others. He had just seen a case where the patient had been under restricted diet for four months, and the aneurism had not extended. He hoped Dr. Barclay would bring forward some cases.

Mr. Clutton thought some of the fibres of the silk ligature had disappeared. In Mr. Lister's cases, where the ligatures had been examined some months after application, none of the fibres had disappeared, though some had become somewhat disintegrated.

NEW INVENTIONS AND IMPROVEMENTS.

NEW SPRING-TOURNIQUET.

Dr. Ward Cousins, of Southsea, has invented a spring-tourniquet of very simple construction, consisting of movable pad, elastic tubing, and a special buckle. The tourniquet can be very easily and quickly applied to a limb so as to control completely the circulation. It can be opened and shut instantly; and admits of self-application to a limb by means of one hand. Two forms of it are made. The first,

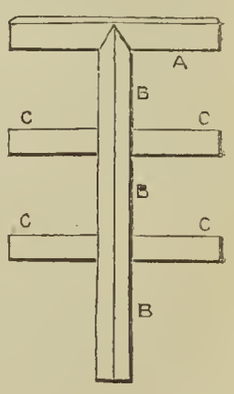


the surgeon's tourniquet, the special feature of which is the contrivance by which it can be instantly tightened or loosened with one hand, and is thus specially calculated to be of use to country surgeons, who may have to operate with very little assistance. When amputating a limb, for instance, the tourniquet can be loosened with the left hand while a bleeding vessel is seized with the forceps in the right hand; the tourniquet can then be instantly closed again, and the vessel secured. The second form, the dresser's tourniquet, is intended for the purposes of immediate application in cases of severe accidents, before the arrival of a surgeon. With a few directions it is meant for use by policemen, railway porters, and for soldiers in the field.

The new spring-tourniquet is made by Messrs. C. Wright and Co., 108, Bond-street.

APPARATUS FOR THE TREATMENT OF DEFORMITIES OF THE LEGS.

The following is a description of an apparatus for the treatment of deformities of the legs in rickety children, by William Webb, M.D., F.R.C.S. Eng. and Edin., of Wirksworth, Derbyshire:—The apparatus, as will be seen by the diagram, consists of a footpiece A, into the middle of which is firmly fixed at right angles a splint B, which is well padded on both sides and covered with flannel. To this splint the legs are bound on either side by a fine bandage, which can be more readily adapted and kept in position by the aid of the cross supports C, which are firmly screwed to the back of the splint B, and also padded. The apparatus may be worn in bed, during sleep, or when riding in a perambulator. It has been found effectual after repeated trials in restoring the normal contour of the bones in cases of external curvature, or rather cases in which the convexity of the curvature was to the outer side of the limb.



The plot of vacant ground on the Thames shore from the Victoria Tower, Westminster, towards the Horseferry-road and Lambeth Bridge, is to be laid out and planted, and kept for public use as a recreation ground.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The half-yearly examination in Arts, etc., of candidates for the diplomas of Fellow and Member of the above institution, which has been conducted by the College of Preceptors at Burlington House, has just been brought to a close. The following gentlemen passed for the Fellowship, viz.:—

A. L. Achard, R. J. Aston, John Bark, W. H. Brenton, A. K. A. Cæsar, J. F. Callcott, J. W. Cockerill, W. G. Bower, George Cormick, Raymond Courteen, W. E. Cree, C. C. Cripps, F. P. C. Cumming, A. H. Dodd, W. H. Dodd, G. H. Doudney, A. W. W. Dowding, A. G. R. Fouleston, Conrad Fraser, John Gay, R. E. Genge, Edgar Gregson, R. P. Griffin, J. S. Grose, Alexander Harper, F. W. Hatchett, Charles Hicks, C. S. Humphreys, Ernest Humphry, D. B. Irving, J. W. F. Jacques, Frank Jeffree, G. A. John, F. F. Jones, G. C. Karop, H. H. Lovell, Alfred Mantle, E. W. Marshall, F. W. Mawby, C. H. Milburn, S. G. Milner, J. H. Neale, J. B. Okell, A. C. E. Parr, F. F. Pearse, H. L. Pearson, W. E. P. Phillips, C. P. Ruel, Bernard Scott, Newman Smith, James Soulter, C. T. Street, J. F. Taylor, John Thomas, T. W. Thomas, W. R. Thomas, Wm. Urwick, C. F. Wakefield, C. B. Waller, James Walls, Lewis Way, William Whitworth, G. W. Wickham, A. G. Wildey, S. Wimbush, O. M. R. Wood, W. M. Yeoman, T. Dutton, E. Firth, N. S. Foster, and A. E. Hart.

The following gentlemen passed the Arts Examination for the Membership, viz.:—

Messrs. J. H. Abram, P. D. Addis, C. H. Andrews, D. N. Armstrong, Charles Averill, Edmund Antrobus, C. P. Andrews, W. H. Baker, F. H. Barford, H. F. Barker, J. C. Barker, A. H. Barstow, J. G. Beaumont, W. R. S. Belcher, W. H. Boger, R. T. Bowden, R. B. Mason, F. Brentnall, J. H. Briggs, F. S. Brittain, Sidney Browse, W. H. Burrows, H. S. Burton, Thomas Calrow, H. J. Capron, J. H. Carson, C. D. Christmas, E. A. Clark, J. A. Cones, C. M. Cooke, C. B. Cooper, Frank Corner, C. B. Cornish, R. W. Councell, H. C. W. Court, A. H. Cree, A. G. M. Creagh, E. Crompton, W. H. Cundell, J. S. Curgenven, Alfred Crompton, F. G. C. Damian, W. W. Darlington, A. E. S. Davey, Charles Dickinson, A. C. Dornford, W. F. C. Dowding, Alfred Duckworth, C. A. Edwards, W. R. Edwards, A. A. Effland, Gwilym Evans, G. S. Fairclough, C. D. Fitch, E. G. Foot, E. H. Freeland, J. A. Dyson, C. D. Freeman, R. W. Gibson, C. E. L. Gilbert, Frank Goffe, J. H. Gough, Henry Granger, Charles Graves, Alfred Green, R. W. Green, H. F. Greig, H. O. Grenfell, A. A. Grosvenor, T. A. P. Hallewell, William Harris, A. W. Harris, E. T. Harris, G. B. Harrop, L. de C. E. Harston, George Harwood, Charles Haynes, R. L. Hildyard, R. F. Hiley, C. R. Hodges, A. E. L. F. W. A. Hubbard, W. H. Hughes, W. H. Hand, A. Harrison, P. S. Hutchinson, C. C. Hulton, G. A. F. Inman, A. Jefferd, T. John, E. J. T. Jones, J. A. E. Jones, T. E. E. Jones, R. S. Inglis, J. Labey, T. Langhorne, A. Latham, B. S. Lawson, F. A. Le Mesurier, F. T. Letts, F. B. Lindsay, Walter Loades, E. A. Lubbock, J. R. G. C. Lucas, R. H. Lucy, B. M. Lewis, A. J. Mainwaring, William Masfen, H. W. Matthews, K. W. McAlpin, J. R. McGavin, T. W. Mead, R. P. Mitchell, George Morgan, T. W. Morgan, Archibald Macqueen, W. E. Newey, S. J. H. Nicholls, Barnes Nowell, E. J. Norris, R. C. Owen, F. A. Parry, H. F. Parsons, Richard Pearson, W. F. Pedler, Stephen Pedley, C. G. Pegge, C. V. Philpot, Arthur Plumbe, W. G. N. Powell, Harry Powlesland, G. A. Pratt, H. O. Preston, F. A. Pring, J. B. Procter, R. A. S. Prosser, P. J. Pugh, H. M. Page, William Rawes, J. R. I. Raywood, W. F. Read, Harding Rees, F. W. Richards, John Richards, R. W. Ronw, J. E. Ricketts, W. L. de Schmid, Gerald Schofield, T. F. Shackleton, H. P. Shadbolt, H. W. Shadwell, G. A. G. Simpson, J. R. Skinner, C. R. Smith, H. C. Smith, F. L. H. Sparrow, J. E. P. Sparrow, Charles Strickland, Robert Stuart, A. H. Sturdie, Henry Swayne, A. C. Syer, G. R. G. Taylor, Wm. Thomas, Wilberforce Thompson, A. A. Tozer, Henry Tonks, J. W. Travell, A. S. Tredinnick, Edward Treharne, Harry Tuck, A. E. Taylor, H. S. Tuppen, C. H. Vickery, R. C. Wakefield, W. T. Wallington, William Washbourn, W. J. Watkins, J. E. Webb, Francis Welsby, J. H. White, L. P. White, T. C. Wild, E. J. P. B. Williams, H. L. Williams, J. T. Williams, Samuel Wilson, A. B. Woakes, N. W. Woods, A. J. Wright, A. E. Woods, J. W. Yeats, J. W. Jessop, A. T. Peachey, E. M. Light, and H. H. Crickitt.

Of the 387 candidates examined there were 106 for the Fellowship, and 281 for the Membership, of which number 71 passed for the first named distinction, and 194 for the Membership.

APOTHECARIES' HALL, LONDON.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, March 18:—

Bartlett, Charles Richard, 32, Halsey-street, S. W.
Clarke, William, Lamont, Ottawa, U.S.
Grindon, Francis James, Olney, Bucks.
Hepburn, John, Turnham-green, W.
Hormazdji, Robert Nesbit, 21, Artesian-road, W.
Lecoq, Jules Arthur, 15, Soho-square, W.

The following gentleman also on the same day passed his Primary Professional Examination:—

Yeatman, John Walter, St. Bartholomew's Hospital.

NAVAL, MILITARY, &c., APPOINTMENTS.

ADMIRALTY.—Staff-Surgeon Maxwell Rodgers, M.D., has been promoted to the rank of Fleet Surgeon in her Majesty's Fleet, with seniority of 6th inst.

BIRTHS.

RIDGE.—On March 19, at Carlton House, Enfield, the wife of J. J. Ridge, M.D. Lond., of a son.

WINCKWORTH.—On March 16, at Shefford, Beds, the wife of Charles Edward Winckworth, L.R.C.P. Lond., of a son.

MARRIAGES.

BALFOUR—BALFOUR.—On March 18, at Norfolk-square, George Paton Balfour, Esq., to Edith, youngest daughter of Surgeon-General Edward Balfour, of 2, Oxford-square, Hyde-park.

BAYARD—SIMPSON.—On March 20, at Carshalton, Surrey, Francis Campbell Bayard, LL.M. Cantab., of the Inner Temple, London, barrister-at-law, to Edith Jane, only surviving child of Frederick Hamilton Simpson, F.R.C.S., of London and Carshalton.

BEHREND—WAGG.—On March 18, at 40, Bryanston-square, Henry Behrend, M.R.C.P., of 26, Norfolk-crescent, Hyde-park, to Marion, daughter of the late John Wagg, Esq., of 72, Gloucester-place, Portman-square.

COLBECK—PHILLIPS.—On March 18, at Hertford, Charles Colbeck, Esq., of Harrow, to Mary, eldest daughter of George M. Phillips, M.R.C.S., of Whitwell, Herts.

FOX—DAVIES.—On March 13, at Cardiff, Joseph Tregelles Fox, M.R.C.S., of Stoke Newington, N., to Sarah Elizabeth, second daughter of Thomas Whicher Davies, Esq., of Haverfordwest.

HUMPHREYS—COBBOLD.—On March 20, at Paddington, Noel Algernon Humphreys, Esq., of Hook, Surrey, to Gertrude, second daughter of T. Spencer Cobbold, M.D., F.R.S., of London.

IRVINE—CORRIE.—On March 20, at Henley-on-Thames, Gerard James Irvine, Surgeon Royal Navy, to Henrietta Frances, youngest daughter of the late William Byrom Corrie, Esq.

DEATHS.

ASHER, JOHN GORDON, Surgeon-Major Bombay Army, at Croft Cottage, Elgin, N.B., on March 2.

BARLOW, MATILDA MARY ANN, wife of Robert Barlow, M.R.C.S., at Norfolk House, Albion-road, Dalston, on March 18.

BARNES, JAMES HINDMARSH, L.R.C.P., at 57, Pembroke-place, Liverpool, on March 19, aged 47.

BUCKELL, ROBERT KEMP, late Surgeon-Major H.M. Indian Army, at 127, Pyle-street, Newport, Isle of Wight, on March 16, aged 56.

CLAY, ROBERT RICHARD, M.R.C.S., at Fovant, Wilts, on March 15, aged 64.

ELSOM, JOSEPH FREDERICK, M.R.C.S., at Limehouse, on March 11, in his 68th year.

MAUNSELL, MADELINE CECILIA, wife of Surgeon-Major Maunsell, A.M.D., at Aldershot, on March 16, aged 36.

SYKES, GEORGE, M.D., at 38, Queen's-road, Dalston, on March 17, aged 49.

THOMSON, CHARLES EDMUNDS, F.R.C.S., at 9, Berkeley-square, Bristol, on March 20, aged 73.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

COUNTY AND COUNTY OF THE BOROUGH OF CARMARTHEN INFIRMARY.—House-Surgeon. He must be unmarried, and have a knowledge of the Welsh language, and be registered to practise both in medicine and surgery. He will have the privilege of taking two apprentices, and must agree not to practise in the county of the borough of Carmarthen for a period of five years from the day of his election. Applications, with testimonials, to be sent to the Secretary, Mr. H. Howells, 58, King-street, Carmarthen, on or before March 31.

DENTAL HOSPITAL OF LONDON, LEICESTER-SQUARE, W.—House-Surgeon. Applications to be sent to the Honorary Secretary at the Hospital, on or before April 14.

FRENCH HOSPITAL AND DISPENSARY, 10, LEICESTER-PLACE, LEICESTER-SQUARE, W.—Resident Medical Officer. Candidates must be duly qualified, and able to speak French. Applications, with testimonials, to be sent to F. Sorel, Esq., Assistant-Secretary, as early as possible.

GREAT NORTHERN HOSPITAL, CALEDONIAN-ROAD, N.—Physician for Out-patients. Candidates must possess the degree of M.D. or M.B. of a British University, and be also Fellows or Members of the Royal College of Physicians of London, or Fellows of the Royal College of Physicians of Edinburgh, or of the King and Queen's College of Physicians in Ireland. Applications, with copies of testimonials, to be sent to A. Phillips, Esq., Secretary, at the Hospital, on or before March 31.

GREAT NORTHERN HOSPITAL, CALEDONIAN-ROAD, N.—Junior Resident Medical Officer. Applications, with copies of testimonials, to be sent to A. Phillips, Esq., Secretary, at the Hospital, on or before April 1.

LONDON HOSPITAL.—Clinical Assistant to the Out-patient Physicians. The appointment is tenable for three months (renewable) from the 1st prox. Candidates are desired to attend personally at one o'clock either on March 30 or April 1. Further particulars can be had on applying to the Secretary, A. G. Snelgrove, Esq. Applications, with testimonials and qualifications, to be delivered to the Chairman of the House Committee, London Hospital, E., before one o'clock on March 30.

METROPOLITAN FREE HOSPITAL, 81, COMMERCIAL-STREET, SPITALFIELDS E.—Assistant-Physician. Candidates possessing the necessary qualification (M.R.C.P.) are requested to forward applications, with testimonials, addressed to the Committee, on or before March 27.

QUEEN CHARLOTTE'S LYING-IN-HOSPITAL, 191, MARYLEBONE-ROAD, N.W.—Resident Medical Officer. Candidates must be duly qualified, and have passed examinations in midwifery. Applications, with copies of testimonials, to be sent to A. Phillips, Esq., Secretary, on or before April 5.

SUDBURY UNION.—Medical Officer for the Fourth District. He will be required to reside in the district, and provide all necessary medicines. Candidates must be registered under the Medical Act of 1868 and be fully qualified. The election will take place on April 1. Applications, with testimonials, to be sent to Mr. Henry C. Canham, Clerk, up to March 29.

TORBAY HOSPITAL AND PROVIDENT DISPENSARY, TORQUAY.—House-Surgeon. Candidates must be unmarried. Applications, with testimonials, to be sent to the Hon. Secretary, W. H. Ritson, Hemsworth, Torquay, not later than March 29.

University College, London.—Third Assistant-Physician. Applications to be sent to the Secretary, Talfourd Ely, M.A., on or before March 29.

Westminster Hospital, Broad Sanctuary, S.W.—Medical Registrar. Candidates must be graduates in medicine of one of the Universities of the United Kingdom, or Fellows or Members of the Royal College of Physicians of London, not practising pharmacy. The appointment is for twelve months. Applications, with diplomas, to be sent to S. M. Quennell, Esq., Secretary, up to March 30.

An inquiry held by Dr. Hardwicke last week at the Coroner's Court, St. Pancras, elicited a statement of the unfortunate result which attended the recent apprehension of Dr. Caleb C. Whitefoord on a charge of forging an order for staying the execution of a convict at Newgate. The inquest was held on the body of a female child of a trooper of the Royal Horse Guards. The mother was attended in her confinement by Dr. Whitcfoord, and after the birth of a first child—born dead—the doctor left to obtain some medicine, but never returned, as he was arrested on leaving. Dr. Wood was subsequently called in, and the second child was born, but died seven hours after birth, and it was alleged—though on what grounds we do not know—that death was due to the delay that had taken place by the enforced absence of Dr. Whitefoord. The doctor explained to the detective officer the serious nature of the case he had in charge, and offered to see his patient in the presence of the officer, but this was refused. The inspector, in answer to a question, explained that it was the duty of the police to detain any person against whom a warrant was issued. After some deliberation the jury found that death resulted from natural causes.

Absence of the Parietal Pericardium.—Dr. Chiari exhibited at the Berlin Medical Society a specimen of almost complete absence of the parietal pericardium which he had obtained at the autopsy of a man who died of cirrhosis. On the removal of the sternum the heart was observed to be completely uncovered, lying in direct contact with the left lung. On examination of the preparation the parietal pericardium was found to be almost completely wanting. The left parietal pleura passed in the ordinary manner to the mediastinum. A small rudiment of the pericardium existed at the posterior periphery of the auricle at the duplicature where the pleura passed into the visceral pericardium. The mediastinum was very small, and the left phrenic nerve ran an abnormal course, crossing over obliquely in front of the heart. During life the patient exhibited no sign of anomaly of the pericardium. Hofrath Prof. Heschl remarked upon the extreme rarity of this anomaly, Rokitansky having met with it only twice in his hundreds of thousands of autopsies. He called to mind a case which he had seen at Graz, in a man who was supposed to have died from a fall. At first sight it seemed an example of this anomaly, but upon examination it proved to be a long laceration of the anterior part of the pericardium; the two halves of the pericardium thus formed being hidden behind the heart.—*Allg. Wien. Med. Zeit.*, March 2.

Martin's Bandage.—In a communication to the *Philadelphia Medical Times* (January 31), Dr. Martin, of Boston, states that although he has not as yet had time to describe the application of his rubber bandage to other affections as fully as he has done for ulcer of the legs, he is shortly about to publish an account of its utility in diseases and injuries of the joints. This is to be followed by others on its applicability to (1) certain cutaneous affections; (2) phlebitis in all its forms, stages, and sequelæ affecting the extremities; (3) sciatica and other forms of neuralgia of the limbs; (4) all forms of œdema and anasarca of the extremities, and in certain other parts of the body; (5) in certain conditions of congestion and inflammation, with their complications and sequelæ; (6) in certain forms of fracture of the bones, and especially in some conditions frequently following such lesions, the result of effusions of various sorts about their seat; (7) in cases of contusion and ecchymosis and their consequences; (8) in certain forms of abscess and their consequences, as sinuses, induration, contraction, and other damage done to muscles, etc.; (9) in many cases of disease of bursæ mucosæ, the thecæ of tendons, etc., and their consequences. "This is a long list, but it by no means exhausts that of the cases in which an ample experience of more than twenty-five years has, *in actual practice*, demonstrated the great value of the pure rubber bandage in surgery."

Pityriasis Rubra.—Prof. Duhring publishes in the *Philadelphia Med. Times*, January 17, a clinical lecture on this rare disease. So rare is it, indeed, he observes, that since it was first described by Devergie, many years ago, a case has only occurred occasionally in France, Germany, or England. In the United States only one other undoubted case has been reported, a few years ago, by Dr. George Fox in New York, and which was also exhibited last year at the American Dermatological Association. The subject of the present case was treated by cod-liver oil both externally and internally, taking for some months an ounce four times daily, and was, when discharged, as bad as, or worse than ever.

Seaside Hospitals.—In an article in the *Presse Belge Méd.* (March 14), Dr. Mahiels records the great progress made in Italy in the foundation of seaside hospitals for scrofulous and rickety children since the first was opened at Viareggio in 1856 with only three patients. Since then they have been established in numerous towns on the coast of various parts of Italy, so that the number of children who have benefited by them now amounts to 30,000. Of these, 10,000 are stated to have been completely cured, 15,000 sensibly improved, and 5000 have derived little or no advantage. The success of these hospitals is now firmly established, abundant funds being forthcoming. Quite lately the Vicomte Roger de Grimberg has left by his will 500,000 fr. for the establishment of a similar hospital in Belgium—a sum which, Dr. Mahiels states, will be amply sufficient to do a great deal with if it be not wasted in architectural vanities. It has now been proved that fireproof hospitals with ample cubic space may be erected at from 2000 fr. to 2800 fr. per bed. The vast and expensive French hospital erected at Berck-sur-Mer, near Boulogne, ought to act as a warning against what should be avoided.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Grosnez.—We think that without much longer and more serious work, especially practical work, you would certainly fail. Seniority and service do not count in the examination.

A General Decrease.—The duty paid in the year 1879 on home spirits for consumption in the United Kingdom, as beverage only, was less by 1,422,064 gallons than the quantity in 1878. In 1879 there was less by 897,786 gallons of foreign spirits imported, entered for home consumption in the United Kingdom, than in 1878. In 1879 there was less by 1,327,202 gallons of foreign wine imported, entered for home consumption in the United Kingdom, than in 1878. The Excise duty charged in 1879 on malt for home consumption (exclusive of malt for distillation duty-free) was less by 7,323,467 bushels than in 1878.

M. T. C.—The practice in dealing with the African medical officers was to allow each year on the coast to count as two years towards the five years required as a qualification for the rank of surgeon, and towards retirement, but not towards increase of pay or the rank of surgeon-major.

Pauper Boys.—The Lord-Lieutenant of Warwickshire, Lord Leigh, has brought before the Warwick Board of Guardians the desirableness of obtaining a training-ship for inland unions. A committee has been appointed with the view to carry it into effect, and to secure the co-operation of other unions.

Pro Bono Publico.—There are three public parks at Birmingham, all of which have been acquired by the town within the last twenty years. Adderley Park was the gift of Lord Norton, Calthorpe Park the gift of Lord Calthorpe, and Aston Park was formed, partly by a company who failed to complete it, and partly by the Corporation, who secured it at a cost of £27,000.

Aqua.—If it were proved that a company furnished impure water, the Board of Trade, we believe, could serve a notice upon the company requiring it to remove the cause of complaint; and if reasonable means were not taken to do so, the Board might then—but not till then—proceed in a court of law with a view to the infliction of penalties.

Patrick and O'Ryan.—It is true that several years ago—in 1872, we think—it was found that enormous quantities of ether were used (not as an addition to whisky or any other spirit to strengthen it, but merely diluted with water) as a stimulant instead of ordinary spirits; but the practice was confined to the North of Ireland, and principally to the counties of Tyrone and Londonderry.

Scotus.—The appointment of a woman to the office of Poor-law Inspector was actually made for the parish of Stromness by the local poor-law authorities; but the Board of Supervision, who had the power of dismissal, considered that a female was not a fit or competent person to discharge such duties, and they therefore cancelled the appointment.

In Memoriam.—The Empress Eugénie has had made, it is said, for the medical man who accompanied the Prince Imperial on his last voyage a costly golden box, in the centre of which is a small miniature of the Prince, in evening dress, with the star of the Legion of Honour on his breast, in which is set a fine diamond of great size and of the very finest water.

Workhouse Beer.—In consequence of many complaints lately of the inferior quality of the beer supplied to the inmates of the Greenwich Infirmary and Workhouse, the attention of the Board of Guardians was drawn to the subject at their last meeting, when it was stated that, to counteract the effects of the beer at present supplied, the medical officer had found it necessary to prescribe brandy for some of the inmates of the Workhouse who drank it. After some discussion, it was resolved to solicit tenders from a few selected firms of good brewers. If on no other grounds, the prospective advantage of economical results from a supply of wholesome beer would most probably be chosen by its obviating the necessity of thus "medicinally" administering brandy.

COMMUNICATIONS have been received from—

Mr. J. Hamilton Craigie, London; Dr. Octavius Sturges, London; Dr. Cayley, London; Dr. J. F. Goodhart, London; Dr. W. Webb, Wirksworth; Dr. H. W. Acland, Oxford; The Secretary of the Statistical Society; The Registrar of Apothecaries' Hall; The Editor of "Iron"; Dr. David Drummond, Newcastle; The Secretary of the Harveian Society of London; Mr. J. A. Mackenzie, London; Mr. Grosnez; Dr. Archibald, St. Andrews; Dr. Gowers, London; The Honorary Secretaries of the Royal Medical and Chirurgical Society; Mr. J. Chatto, London; Mr. T. M. Stone, London.

BOOKS, ETC., RECEIVED—

The Sunday Question and the General Election—Physiology of Religion, by Henry Lee, F.R.C.S.—Transactions of the Odontological Society of Great Britain, vol. xii.—Report of the Association for the Oral Instruction of the Deaf and Dumb for 1879—Beiträge zur Klinischen und Experimentellen Geburtskunde und Gynäkologie, von Dr. Fred. Adolph Kehrer—Operative Surgery, by Stephen Smith, A.M., M.D.—Indian Hygiene, by John C. Lucas. F.R.C.S.—Montreal General Hospital Reports, vol. i. 1880—Weekly Return of Births, Deaths, and Marriages in the Eight Principal Towns of Scotland.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Centralblatt für die Medicinischen Wissenschaften—Nature—Revue Médicale—Occasional Notes—Gazette Hebdomadaire—Louisville Medical News—Boston Medical and Surgical Journal—Dublin Jonrnal of Medical Science—El Siglo Medico—Index Medicus—Detroit Lancet—American Bookseller—El Observador Medico—Girl's Own Paper—Leisure Hour—Sunday at Home—Boy's Own Paper—Monthly Review of Dental Surgery—Therapeutic Gazette, Nos. 1 and 2.

APPOINTMENTS FOR THE WEEK.

March 27. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

29. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

30. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

31. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Lister), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.; National Orthopædic, Great Portland-street, 10 a.m.

April 1. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

Harveian Society, 8½ p.m. Dr. Cavafy, "On a Case of Urticaria Pigmentosa." Mr. Malcolm Morris, "On a Case of Pemphigus Cured by Arsenic." Mr. Reeves, "On Rectal Stricture, with Special Reference to Rectotomy and Twenty-five Colotomies."

2. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, March 20, 1880.

BIRTHS.

Births of Boys, 1410; Girls, 1347; Total, 2757.
Corrected average in the 10 years 1870-79, 2674·4.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	768	697	1465
Average of the ten years 1870-79, corrected to increased population	896·8	846·1	1742·9
Deaths of people aged 80 and upwards ...	...	...	52

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa
West	561359	2	9	9	4	7	...	...	...	3
North ...	751729	8	3	11	4	42	...	3	1	2
Central ...	334369	...	1	...	4	6	...	1	...	1
East	639111	—	3	9	1	25	...	1	1	2
South	967692	1	4	16	5	34	...	3	...	6
Total	3254260	11	20	45	18	114	...	8	2	14

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	30·076 in.
Mean temperature	41·3°
Highest point of thermometer	55·2°
Lowest point of thermometer	32·8°
Mean dew-point temperature	37·0°
General direction of wind	E. & E.N.E.
Whole amount of rain in the week	0·00 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, March 20, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1880.*	Persons to an Acre. (1880.)	Births Registered during the week ending Mar. 20.	Deaths Registered during the week ending Mar. 20.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3664149	48·6	2757	1465	55·2	32·8	41·3	5·17	0·00	0·00
Brighton	107321	45·6	72	22	52·0	35·6	42·4	5·78	0·00	0·00
Portsmouth ...	134224	29·9	85	49	...	..	..	...	...	...
Norwich	85827	11·5	66	40	49·8	29·0	39·0	3·89	0·00	0·00
Plymouth	74993	53·8	49	44	55·0	39·2	45·7	7·61	0·28	0·71
Bristol	213536	48·0	172	75	56·2	30·1	43·2	6·22	0·00	0·00
Wolverhampton ...	75970	22·4	58	26	53·2	26·0	39·0	3·89	0·00	0·00
Birmingham ...	394738	47·0	317	139	...	...	..	...		...
Leicester	129912	40·6	91	41	58·2	26·0	41·4	5·22	0·00	0·00
Nottingham ...	173827	17·4	97	95	57·1	25·9	40·7	4·83	0·00	0·00
Liverpool	544056	104·4	415	246	56·0	31·3	42·2	5·67	0·00	0·00
Manchester ...	363130	84·6	300	197	...	...	...	...	...	...
Salford	185786	35·9	140	76	...	...	...	...	...	...
Oldham	115413	24·7	94	77	...	...	...	...	...	...
Bradford	197196	27·3	134	79	53·0	32·9	40·0	4·44	0·01	0·03
Leeds	318929	14·8	215	121	50·0	32·0	40·2	4·55	0· 0	0·00
Sheffield	304938	15·5	209	125	53·5	28·5	39·1	3·95	0·00	0·00
Hull	149627	41·2	119	50	...		...	...	...	...
Sunderland ...	116730	42·2	79	46	52·0	29·0	40·4	4·66	0·02	0·05
Newcastle-on-Tyne	149366	27·8	123	62	...	...	...	...	...	...
Edinburgh	229839	54·8	162	119	...	...	...	...	...	...
Glasgow	589598	97·7	424	274	...	...	...	...	...	...
Dublin	314666	31·3	188	224	55·1	32·5	44·3	6·84	0·77	1·96
Total of 23 Towns in United Kingdom	8633571	39·2	6366	3692	58·2	25·9	41·4	5·22	0·08	0·20

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 30·08 in. The lowest reading was 29·89 in. on Tuesday afternoon, and the highest 30·23 in. on Friday morning.

* The figures for the English and Scottish towns (except for Nottingham, Salford, and Oldham) are the numbers enumerated in April, 1871, raised to the middle of 1880 by the addition of nine years and a quarter's increase, calculated at the rate which prevailed between 1861 and 1871. Revised estimates have been adopted for Nottingham, Salford, and Oldham, based upon special returns of inhabited houses existing within those boroughs. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

THE LUMLEIAN LECTURES
ON THE
DIGESTIVE FERMENTS AND THE PREPARATION AND USE OF ARTIFICIALLY DIGESTED FOOD.

Delivered before the Royal College of Physicians.

By WILLIAM ROBERTS, M.D., F.R.C.P., F.R.S.,
Physician to the Manchester Royal Infirmary;
Professor of Clinical Medicine to the Owens College.

Lecture I.—Part I.

Digestion has been usually regarded as the special attribute of animals. They receive into their alimentary canal the food which they require for their sustenance in a crude form. It is there subjected to the action of certain ferments which transmute its elements, by a peculiar chemical process, into new forms which are fitted for absorption. Looked at in this restricted sense, plants have no digestive function. They possess no alimentary canal nor any vestige of a digestive apparatus. But when the matter is examined more profoundly it is seen that plants digest as well as animals, and that the process in both kingdoms of nature is fundamentally the same.

In order to understand this generalisation—which was first propounded by Claude Bernard, and constitutes one of the most important fruits of his splendid labours,(a)—it is necesary to recognise digestion under two types or conditions—namely, a digestion which takes place exteriorly at the surface of the organism, and a digestion which takes place interstitially in the interior of the organs and tissues.

Exterior digestion is that common process with which we are familiar as taking place in the alimentary canal of animals, by which the crude food introduced from without is prepared for absorption.

Interstitial digestion, on the other hand, is that more recondite process by which the reserves of food lodged in the interior of plants and animals are modified and made available for the purposes of nutrition.

These two types of digestion are essentially alike both as regards the agents and the processes by which they are carried out; and although one type of digestion is more developed in the animal kingdom, and the other type more developed in the vegetable kingdom, both types are represented in the two kingdoms, and bear witness to the fundamental unity of the nutritive operations in plants and animals.

I shall only be able to indicate in outline the facts and arguments on which Bernard sought to establish these propositions.

Exterior Digestion.

We all know that the alimentary canal is simply a prolongation of the external surface; that the skin is continued, at either extremity, without a break, into the alimentary mucous membrane. Accordingly the processes which take place in the digestive tube are, strictly speaking, as much outside the body as if they took place on the surface of the skin. Upon this inner surface, if I may so call it, are poured out the digestive juices, charged with the ferments which are the special agents of the digestive processes. This is the common condition of exterior digestion as it occurs in animals—but it is not the only condition. Among some of the lowest members of the animal series a permanent alimentary canal does not exist. In the amœba any portion of the exterior is adapted for the reception of food. The morsel sinks into a depression formed on the surface at the point of impact; it is digested in this improvised stomach, and the indigestible portions are expelled through an improvised anus.

Among plants exterior digestion is a much less prominent feature than among animals, but examples of its occurrence and evidence of its importance are not difficult to point out. In the lowest orders of plants—fungi and saprophytes, which are devoid of chlorophyll—exterior digestion is probably a function of prime necessity. In all likelihood their carbon-containing food is only absorbed after undergoing a process of true digestion. The transformation of cane-sugar by the yeast plant is a striking example—though a distorted one—of exterior digestion. Cane-sugar is a crude form of food both to plants and animals, and requires to be transformed into invert-sugar (a mixture of equal parts of dextrose or grape-sugar and lævulose or fruit-sugar) before it can be made available for nutrition. The yeast plant is no exception to this rule; and when placed in a solution of cane-sugar it is under the necessity of transforming that compound into invert-sugar before it can use it for its profit in fermentation. This transformation is effected by a soluble ferment attached to the yeast cell, which can be dissolved from it by water. We shall see later on that a similar ferment exists for a similar purpose in the small intestine of animals—having the same property of changing cane-sugar into invert-sugar.

Even among the higher plants exterior digestion is not quite unknown. The function may be said to be foreshadowed in the excretion of an acid fluid by the rootlets of some plants which serves to dissolve and render absorbable the mineral matters in their vicinity. But genuine and most remarkable examples of this type of digestion occur among the so-called insectivorous plants, of which Mr. Darwin has given so interesting an account. In the sundews, the plant, by a peculiar mechanism provided on its foliage, seizes the insects which fortuitously alight on its leaves. A stomach is extemporised around the prey, into which is poured out a digestive fluid. The prey is digested, and the products absorbed, in essentially the same manner as in the gastric digestion of animals.

Interstitial Digestion.

Both animals and plants lay up reserves, or stores, of food in various parts of their tissues for contingent use, so that if you suddenly withdraw from them their food-supplies neither animal nor plant immediately dies—it lives for a certain time on its reserves. But before these reserves can be made available for the operations of nutrition they must first be converted from their inert and mostly insoluble state into a state of solution and adaptability to circulate in the nutritive fluid which constitutes the alimentary atmosphere of the protoplasmic elements. This conversion of inert store-food into available nutriment is brought about certainly in some, presumably in all cases, by the same agents and processes as the digestion which takes place in the alimentary canal of animals; and it is this identity in the agents and the processes which Bernard insisted on as the proof of the fundamental identity of the two kinds of digestion.

The storing up of food is carried on to a larger extent in the vegetable than in the animal kingdom, owing to the intermittent life of most plants. In their seed, tubers, bulbs, and other receptacles are laid up stores of albumen, starch, cane-sugar, and oil—designed primarily for the growth and nutrition of the plant or its offspring, but which are largely seized on by animals and utilised for their food. Owing to their more continuous life, animals store up food less than plants. Nevertheless, they accumulate stores of fat in various parts of their body, of animal starch (glycogen) in their livers and elsewhere, and of albumen in their blood. Birds also store up large quantities of albumen and fat in their eggs.

The transformation of store food has been followed out most completely in regard to starch, its congener glycogen, and cane-sugar. Bernard worked out this subject with marvellous minuteness and success. It has long been known that the transformation of starch into sugar in germinating seeds was effected by diastase; and that a similar ferment, existing in saliva and pancreatic juice, performed the same office on the starchy food of animals. It has also been proved that the stores of starch laid up in the tuber of the potato and in various parts of other plants are changed at the periods of budding and growth in the same way and by the same agent. Bernard showed that animal starch or glycogen is stored up largely not only in the liver, but in a variety of other situations, and especially that it is widely distributed and invariably present in large quantities in embryonic conditions. In juxtaposition with the glycogen is found a

(a) Claude Bernard, "Leçons sur les Phénomènes de la Vie," tome ii. Edited, after his death, by Dastre. Paris, 1879.

diastatic ferment which transforms it into grape sugar, as it is required for the active operations of growth and nutrition.

The stores of cane-sugar which exist in the beetroot and in the sugar-cane are transformed or digested in like manner into invert-sugar when the plants enter on the second phase of their life—the phase of inflorescence and fructification. Here, again, it has been proved that the converting agent is a soluble ferment—the same ferment which, as already mentioned, is attached to the yeast cell—and the same ferment which exists in the small intestine of animals for a similar purpose.

The transformation of store proteids and fats has not been followed out with the same success as that of starch and cane-sugar. But the evidence, as far as it goes, and analogy point to the conclusion that the stores of albuminous and oily matters contained in the seeds, bulbs, and other receptacles of vegetables are subjected to a digestive process before they are made available for the nutritive operations of the plants, and that the changes thus effected are of the same nature and accomplished by the same agents as those which take place in the digestion of proteids and fats in the alimentary canals of animals.

I have, I think, said enough to show the scope of the evidence and the analogies from which Bernard deduced certain far-reaching generalisations, and which I have ventured to summarise in my own language in the following propositions:—

(1.) Digestion, or the process by which crude food is changed into available nutriment, is a function of capital importance in every form of active life. (2.) This function is exercised partly on food brought into proximity with the surface of the organism (exterior, chiefly intestinal digestion) and partly on reserves of food laid up in the interior of the organism (interstitial digestion). (3.) The agents concerned in this function and their mode of action are essentially the same whether the organism be a plant or an animal; and whether the action takes place in the interior of the tissues, or on the general or intestinal surfaces.

General Characters and Properties of the Digestive Ferments.

The essential work of digestion is carried out by a remarkable group of agents, called soluble or unorganised ferments. These are found dissolved in the several digestive juices or secretions, which are thrown out on the path of the food as it travels along the alimentary canal. The physical and mechanical processes to which food is subjected in the mouth and stomach are all purely introductory or preparatory, and are solely intended to facilitate the essential work of digestion, which consists in the action of the digestive ferments on the alimentary principles.

The number of distinct ferments employed in the digestion of the miscellaneous food used by man is not accurately known, but there are at least seven or eight of them. The accompanying table presents in one view a scheme of the several digestive secretions or juices, and the ferments which they contain, together with an indication of the action of each ferment on the several alimentary principles.

Table of the Digestive Juices and their Ferments.

Digestive juices.	Ferments contained in them.	Action on food materials.
Saliva	Salivary diastase or ptyalin	Changes starch into sugar and dextrine.
Gastric juice...	*a.* Pepsin	Changes proteids into peptones in an acid medium.
	b. Curdling ferment...	Curdles the casein of milk.
Pancreatic juice	*a.* Trypsin	Changes proteids into peptones in alkaline and neutral media.
	b. Curdling ferment ...	Curdles the casein of milk.
	c. Pancreatic diastase	Changes starch into sugar and dextrine.
	d. Emulsive ferment...	Emulsifies and partially saponifies fats.
Bile...	?...	Assists in emulsifying fats.
Intestinal juice	*a.* Invertin	Changes cane-sugar into invert sugar.
	b. ? Curdling ferment	Curdles the casein of milk.

An examination of the table shows that a long and complicated series of ferment-actions is required to accomplish the digestion of our food. Starch is attacked at two points—in the mouth and in the duodenum—by two ferments, salivary and pancreatic diastase, which are substantially identical. Albuminous matters are also attacked at two points—in the stomach and in the small intestine—but here the two ferments, pepsin and trypsin, are certainly not identical. The ferment, of which the only known characteristic is to curdle milk, is found in the stomach and in the pancreas, and I think also in the small intestine. The bile is not known to possess any true ferment-action, but it assists, by its alkalescent reaction and by its physical properties, in emulsifying and promoting the absorption of fatty matters. The ferment which transforms cane-sugar, strange to say, is not encountered until the food reaches the small intestine.

The known digestive ferments all belong to the class of soluble or unorganised ferments. They are sharply distinguished from the insoluble or organised ferments, of which the type is yeast, in not having the power of self-nutrition and self-multiplication. All living organisms possess this power either in a dormant (potential) or in an active (kinetic) state. Soluble ferments cannot therefore be said to be alive—but they are exclusively associated with living organisms and take an essential part in their vital operations.

The digestive ferments are all the direct products of living cells, and may be regarded as detached repositories of cell-force. They are quite unknown in the domain of ordinary chemistry. Their mode of action bears no resemblance to that of ordinary chemical affinity, and has a distinctively physiological character. They do not derive their marvellous endowments from their material substance. They give nothing material to, and take nothing material from, the substance acted on. The albuminoid matter which constitutes their mass is evidently no more than the material substratum of a special kind of energy—just as the steel of a magnet is the material substratum of the magnetic energy, but is not itself that energy. This albuminoid matter of the ferment may be said to become charged, at the moment of elaboration by the gland-cells, with potential energy of a special kind—in the same way that a piece of steel becomes charged with magnetism by contact with a pre-existing magnet. The potential energy of the ferment is changed into the active form (*i.e.*, becomes kinetic) when it is brought into contact with the alimentary substance on which it is designed to act.

The chemical and physical characters of the digestive ferments appear to be tolerably uniform. In composition they resemble proteid substances, and contain carbon, oxygen, hydrogen, and nitrogen in the same or somewhat similar centesimal proportions as albumen. But as not one of them has yet been obtained in a state of absolute isolation and purity, this is, strictly speaking, a matter of inference rather than an ascertained fact.

They are all soluble in water; they are all diffusible, though with difficulty, through animal membranes and parchment paper. They are also capable (all those I have tried) of passing through porous earthenware by filtration under pressure; but some of them pass through readily, and others with the utmost difficulty and only in the smallest proportions.

They are precipitated from their watery solutions by absolute alcohol; but, unlike other proteids (peptones excepted), they are not truly coagulated by alcohol. When the alcohol is removed the ferments are still found to be soluble in water and to retain their activity unimpaired.

They are coagulated and rendered permanently inert by the heat of boiling water; and when in solution they are coagulated and destroyed by a heat of about 160° Fahr. (71° C.).

Each digestive ferment has its special correlative alimentary principle, or group of principles, on which alone it is capable of acting. Diastase acts exclusively on amylaceous substances; pepsin and trypsin act only on the azotised principles; the emulsive ferment of the pancreas is only capable of acting on fatty bodies; the inversive ferment of the small intestine has no activity except on cane-sugar.

The changes impressed on alimentary principles by the digestive ferments are not, chemically speaking, of a profound character, and they affect much more the physical state of these principles than their chemical composition. In the main they are processes of deduplication and hydration; and the result is to render the substances operated on more soluble and more diffusible—to diminish their colloidal

state, and to make them approach or even to reach the crystalloid state. This does not appear to be an invariable event however. Cane-sugar is a marked exception—it is converted in the small intestine into invert-sugar (a mixture of equal parts of grape-sugar or dextrose and fruit-sugar or lævulose); but invert-sugar, though more highly hydrated than cane-sugar, is neither more diffusible nor more soluble.

It does not appear to be absolutely true that all food requires digestion before it can be absorbed. Fat is largely taken up by the lacteals in its unaltered state—except in so far that it is finely divided or emulsified. Grape-sugar (dextrose) is not known to suffer any digestive operation, but to be absorbed unchanged. Perhaps it would be more correct to say that grape-sugar is an article of food predigested for us by the agency of plants.

Although the mode of action of digestive ferments is special and peculiar, the results of that action are not peculiar, but can be obtained in other ways by ordinary chemical forces. By long-continued boiling in water—and more rapidly by boiling with acidulated water—starch is converted into dextrine and sugar, and albumen is changed into a substance resembling peptone. The peculiarity of the action of ferments consists in this: that the ferments are able swiftly, and without violence, to produce changes which, by ordinary chemical agencies, can only be produced either by strong reagents, or by long-continued and very slow action of weaker reagents. It is interesting to remark that the changes produced in food by digestion are, in their ultimate results, very similar to, if not identical with, those produced by protracted cooking.

CROONIAN LECTURES.

ON SOME POINTS IN THE PATHOLOGY AND TREATMENT OF TYPHOID FEVER.

Delivered at the Royal College of Physicians of London.

By WM. CAYLEY, M.D., F.R.C.P.,

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Lecture II.

When we proceed to consider the clinical and pathological phenomena of typhoid fever, and to compare them with those of allied diseases, it is evident that we may divide them into two classes—1. Those which are peculiar to this form of fever; 2. Those which are common to it with many other febrile diseases;—the first being the characteristics of the species, the second those of the genus.

To the former class belong the etiology and mode of dissemination, the period of incubation, the intestinal lesions, the roseola, and the type and duration of the fever; to the latter, the high temperature, the febrile consumption and wasting, the albuminous infiltration and softening of many organs and tissues, and various disturbances of the principal functions of the body.

I propose first of all to consider the pathology of some of these secondary phenomena, which are indeed of primary importance in the treatment, for our control over the former is so restricted that when once the system has become infected with the typhoid poison it is out of our power to prevent it from producing the typical lesions.

If we examine carefully the organs of a fatal case of typhoid fever, or of any of the infective fevers, or even of other febrile diseases which are not due to an infective process—though here the changes are less constant and less marked—we shall find some or all of the following morbid conditions:—1. A granular or albuminous infiltration of the cells of most of the glandular organs, especially the liver, the kidneys, the salivary glands, the pancreas, the gastric glands; and also a similar change in the striped muscular fibres, both of he heart and voluntary muscles.

The change consists in the appearance in the protoplasm of the cells and fibres of extremely minute granules, soluble in acetic acid, giving a clouded appearance which has been compared to that of ground glass; this obscures the nuclei, and causes, when advanced, some enlargement and irregularity of form. In extreme cases the cells thus affected disintegrate into a detritus, this being usually, though perhaps not necessarily, associated with fatty degeneration. Unless the change is very extensive the affected organs do not show any marked alteration to the naked eye; they may be somewhat enlarged, of diminished consistency, and, unless congested, paler than usual, with their normal shiny appearance somewhat dulled. Virchow, as is well known, regarded this granular infiltration as an inflammatory parenchymatous exudation; and in many cases these changes are associated with processes which are unquestionably inflammatory, but they may occur independently, and must probably be looked upon as essentially of a degenerative nature; often, indeed, they are but the first stage towards fatty degeneration.

A change, which is probably of the same nature, occurs in the nerve cells of the central nervous system; they become granular, with an increased deposit of granular pigment.

It can hardly be doubted but that the result of a large number, if not of the majority, of fatal cases of typhoid is due to these changes. If we exclude those deaths which are directly caused by the intestinal lesions, as perforation and hæmorrhage, which after all are the minority, the remainder may for the most part be ascribed to failure of the heart and central nervous system. And of these, failure of the heart with its concomitant congestion of the lungs plays the most important part.

The affection of the heart, then, is of primary importance, and its pathology and symptoms have been most carefully investigated by many observers. Very often the heart presents no obvious changes to the naked eye; in other cases it is more or less softened and altered in colour; but without a microscopical examination it is impossible to pronounce with any certainty on its condition. The changes may affect both the muscular fibres, the inter-fibrillar connective tissue, and the vessels. The fibres present to a greater or less degree the granular changes which I have described; the striæ are more or less obscured, and frequently with the albuminous granules oil globules are present. The muscle nuclei often show indications of proliferation, and a small-celled infiltration is frequently visible between the fibres, due either to an exudation or to proliferation of the connective tissue. M. Hayem also describes a proliferation of the cells of the tunica intima of the small arteries, which he ascribes to an endoarteritis. Not unfrequently there is a diffused sanguineous infiltration of the inter-muscular connective tissue. Side by side with the altered fibres we commonly find others which are quite normal. These changes are frequently scattered in patches through the walls of the heart, and are often well marked in the musculi papillares of the mitral valve. We have, then, here evident signs of an irritative lesion as well as of degeneration, and M. Hayem regards the process as essentially a myocarditis.

The symptoms of this degeneration of the heart are well known and had attracted the attention of all the great writers on fever before the intimate pathology of the affection was studied. They consist in feebleness of the cardiac impulse, which sometimes becomes almost imperceptible; an alteration in the character of the first sound, which becomes short and faint; and to this must be added the soft systolic apex-murmur which is so frequently present in severe cases of typhoid, and which disappears again during convalescence, and is probably due to want of tone in the musculi papillares of the mitral valve allowing some regurgitation. This systolic murmur is often present before the other signs are very pronounced.

Corresponding changes occur in the pulse; the usual febrile dicrotism becomes exaggerated, and although the pulse may remain for a time tolerably full, it becomes extremely compressible, undulating, and shows more or less irregularity not so much of rhythm as of force.

When death is caused by this condition of the heart, it is usually preceded by a gradually increasing hypostatic congestion of the lungs, and takes place slowly; but occasionally it is quite sudden from syncope. Usually the symptoms of this degeneration of the heart in typhoid do not show themselves till the later stages of the disease. But there are reasons for believing that the affection may begin quite early, and run a very rapid course. Last year a woman in the London Fever Hospital died quite suddenly from syncope about the twelfth or fourteenth day of the disease, before any intestinal sloughing or ulceration had taken place; and the heart was found in an advanced stage of granular infiltration.

These cardiac changes are by no means peculiar to typhoid fever: they are met with in typhus, small-pox, erysipelas, scarlatina, diphtheria—where they are usually extremely well-marked; and in this disease, as is well known, sudden death by syncope is by no means uncommon.

The next change which is common to typhoid and many other fevers is the so-called vitreous or waxy degeneration of the striped muscles, described by Zenker. The fibres swell, lose their striation, and the tube of sarcolemma becomes filled with a semi-transparent, colourless, homogeneous material, which has been compared to wax in appearance. These altered fibres present transverse cracks and fissures, and ultimately break up into irregular fragments, which become smaller and smaller, and at last disappear, leaving the sarcolemma empty. Then, if the patient recovers, the fibre is regenerated by a cell-growth within the sarcolemma. Most probably the process consists primarily in a coagulation of the contractile muscle-substance analogous to that which takes place in the rigor mortis. This change is common to many fevers, as typhus, small-pox, scarlatina, tuberculosis. In typhoid it is often very extensive, and may cause considerable temporary destruction of muscle. It may affect all the striped muscles, but is most frequently met with in the muscles of the abdominal wall, the adductors of the thigh, the diaphragm, and the tongue. Though not very often present in the heart, it does occasionally occur here also.

Another change which is common to all febrile diseases is the diminution of the red blood-cells, probably due to increased disintegration on the one hand, and to diminished formation on the other.

A fourth change is the wasting of the body. This is usually proportionate to the intensity and duration of the fever; and in typhoid the serious lesions of the digestive canal tend still further to increase it.

Leyden reckons the average daily loss of weight in high continued fever at about 7 per 1000 of the total weight of the body, which is about half that which takes place in total deprivation of food; and Chossat has shown that death takes place from inanition when the body has lost 40 per cent. According to this calculation it would take eight weeks of high continued fever to reduce the weight 40 per cent. and cause death from inanition; but in chronic fever a much greater loss can be supported, in consequence of the febrile process maintaining the temperature, and so preventing death from cold,—inability to maintain the temperature being one of the causes of death in inanition.

It rarely happens that death takes place in typhoid merely from the febrile wasting, though this is often very great and exceeds the daily average given by Leyden. I have recently had under my care a case where the weight was reduced in about four weeks from eleven stone to eight stone—a loss of nearly 30 per cent. Supposing the fever to have continued for eight weeks, this would have produced a loss of nearly 60 per cent. It would, however, seem that the amount of wasting is greater in persons who are muscular and corpulent than in those who are spare and lean: the latter class, it is well known, bear an attack of fever better than the former. The causes of this wasting of the body in fever are twofold. First, simple inanition due to the diminished ingestion and assimilation of food, the result partly of failure in the appetite, partly of impaired digestive and assimilating power, and partly from restriction of the diet in consequence of certain theories as to the injurious effects of food in fever. The influence of this last cause varies, of course, with the mode of treatment which happens to be in vogue. In this country, in consequence of the teachings of Graves, Stokes, Todd, and other authorities, fever patients are for the most part given as much food as they can assimilate; but there have been times, especially on the Continent, when the routine fever-diet would barely suffice to ward off death from inanition. Under any circumstances it is probable that the amount of food assimilated in fever does not amount to half that taken in health.

This wasting from inanition takes place chiefly at the expense of the adipose tissue and of the store albumen, *i.e.*, the albumen of the blood, lymph, and interstitial fluids; to a less degree, and chiefly in the later stages, at the expense of the tissue albumen.

The second cause of the wasting in fever is the increased consumption due to the febrile process. This in man affects both the fat and the albumen, though in the artificial septic fever of dogs it appears that the consumption of the hydrocarbons is not increased.

The consumption of albumen is measured by the amount of the urea discharged, which in fever very much exceeds that which could be produced by the metabolism of the nitrogenous food, and, notwithstanding the restricted diet, often exceeds the amount passed in health on a full diet. This great increase in the discharge of urea is always most marked in the earlier stages of the fever, and in protracted fevers, as typhoid, becomes much diminished in the later stages.

There are strong reasons for believing that this increased formation of urea takes place at the expense of the tissue albumen, and not of the store albumen; for it is found that it is accompanied by an increase of the salts of potash in the urine, while the salts of soda are commonly diminished: hence it is probable that the urea is derived from albumen which is associated with potash, and not with soda. Now, this is the case with most of the tissues, especially the muscles and red blood-cells; while in the liquor sanguinis and lymph the salts of soda predominate: hence in all probability the former, and not the latter, are the sources of the urea produced by the febrile consumption. The colouring matter of the urine appears also to be increased in fever, and this must necessarily be derived from the coloured tissues, especially the red blood-cells, which we have seen to undergo great diminution; and as extensive degenerative changes are commonly found in the muscles, it is probable that these tissues especially suffer in the febrile process.

The consumption of hydro-carbons, as shown by the increase of carbonic acid in the expired air, does not admit of so exact a determination; the proportion in each expiration is always diminished, but, owing to the increased frequency of the respirations, the total amount expired in twenty-four hours is always increased. Senator reckons this increase at 37 per cent.—a far larger quantity than could be afforded by the carbon set free by the increased disintegration of the albumen.

We have now to consider what is perhaps the most important phenomenon of fever, the temperature.

The maintenance of the temperature of the body depends, of course, on a balance being kept up between the production and dispersion of heat, this balance being maintained by a regulating apparatus, in consequence of which, in a state of health, the production of heat on the one hand, or its dispersion on the other, may be very greatly modified without producing more than slight and temporary alterations of temperature. There can be no doubt but that this regulation is effected through the nervous system, though the exact mode of operation is still somewhat obscure.

When the influence of the intracranial part of the nervous system is removed, as by the crushing or division of the spinal cord below the origin of the phrenics, the temperature of the body, as is well known, cannot be maintained; it has become *labile* instead of *constant*. Sometimes a great rise takes place, sometimes a fall. In man the former is the more common effect, though several cases have been recorded where the temperature has fallen to extremely low degrees. In small animals the effect seems to depend very greatly on external conditions. Under the influence of external warmth the temperature will rise to extreme heights; if the external conditions favour cooling, the temperature will sink to such a degree that the animal dies of collapse. These alterations of temperature due to injury of some part of the nervous system are probably produced by alterations in the dispersion of heat, which is effected chiefly by the lungs and skin, and consequently regulated by the respiratory and vaso-motor centres together with the special nerves (if such there be) which control the sweat glands.

What part the nerve centres play in the regulation of the production of heat, is a question of great difficulty, and one about which physiologists are by no means agreed. There can be no doubt but that the chemical processes by which heat is produced in the animal body are independent of the nerve centres. This is shown by the fact that heat continues to be produced after the complete destruction of the spinal cord; nay, the production goes on for some time after death has not only destroyed all nervous influence, but has brought the circulation itself to a standstill. It has been proved by Valentin that the post-mortem production of heat is a constant phenomenon; and in consequence of the

diminished dispersion from arrest of the cutaneous circulation and respiration, we often see an actual rise of temperature. Generally, however, this post-mortem formation of heat is only indicated by a retardation of the cooling of the body.

Nevertheless, it can hardly be doubted but that the production as well as the dispersion of heat can be greatly modified by nervous influence, though we are not, perhaps, justified in assuming the existence of a special heat-exciting and heat-depressing centre. The phenomena are most probably vaso-motor. It is evident that if more or less blood flow through the more active heat-producing organs, more or less heat will be produced.

When we proceed to consider the cause of the high temperature in typhoid fever, where it often remains above normal for several weeks, we can hardly doubt but that there is some disturbance of the regulating function, for no mere alteration of the conditions either of the production or dispersion will cause more than slight and temporary changes in the temperature; but the nature of this disturbance is still very obscure. That the vaso-motor system is rendered more unstable in typhoid is shown by the phenomena of the so called *tâche cérébrale*, which are almost always well marked. Now, in a disease like typhoid, in which the temperature usually runs such a typical course, with regular diurnal variations, corresponding, though in an exaggerated manner, to the diurnal fluctuations in health,—with so steady a rise to the fastigium, and decline to the defervescence, so that from a mere inspection of the chart we can generally diagnose the disease,—it is quite certain that the regulating apparatus has not ceased to act. The view has been put forward, and widely accepted, that in typhoid fever the regulating point has been simply raised and adapted, as it were, to a temperature, say five degrees above the normal. If, however, we compare the behaviour of the temperature in this disease and in health, this view becomes untenable. In the first place, the temperature has become more labile; it can easily be raised and depressed by causes which would have no effect in helath. Thus, changes in diet, slight exertion, mental emotion, will often cause great temporary alterations. The same point is shown by the effect of remedies. A dose of thirty or forty grains of quinine will hardly affect the temperature in health, but in typhoid fever will generally reduce it three or four degrees, and keep it down for several hours.

Secondly, we miss in fever that compensatory reaction which Jürgensen has shown to occur in health when the temperature is artificially reduced. According to his observations, if a healthy man be placed in a cold bath, the temperature may be reduced many degrees, in proportion to the coldness and duration of the bath; and it continues to sink for some time after removal. Soon, however, it again rises, and continues to do so till it has gone above the normal point. If the bath be repeated, the same phenomena show themselves; but after a certain number of repetitions the reactive rise counteracts the chilling effect of the bath, so that further immersion no longer reduces the temperature of the rectum. In typhoid this compensatory rise does not take place, or at any rate to a much less degree, and after fifty or even a hundred and fifty repetitions the last bath reduces the temperature as effectually as the first. Hence in typhoid fever we regard the regulating influence as weakened, or at any rate rendered insufficient for the new conditions caused by the fever, but neither abolished nor set at a higher point.

We, however, not unfrequently meet with cases where the temperature appears to follow no law, but where the regulating function seems to be entirely suspended: where sometimes the temperature will rise to hyperpyretic heights, far exceeding those that are ordinarily met with in fever, and incompatible with the continuance of life; at other times it will fall far below the normal, and the patient sink into a state of collapse.

There can, I think, be little doubt but that these hyperpyretic temperatures are due to a paralysis of the heat-regulating functions of the nervous system, and are mostly an indication of a general failure or paralysis of the nerve centres. Usually, therefore, their occurrence is a certain sign of approaching death; and in this form hyperpyrexia is very often seen at the termination of all febrile diseases, including typhoid. In these cases the patient does not die from hyperpyrexia, but he has hyperpyrexia because he is dying; and no lowering of the temperature by the abstraction of heat, as by a cold bath, has any effect in retarding the fatal event. Indeed, where there is complete paralysis of the regulating centres, it is not possible to lower the temperature except quite temporarily; it rises again immediately the abstraction of heat is desisted from. In other cases, however, hyperpyrexia may occur without any general or irremediable failure of the functions of the nervous system, though the high temperature itself will, if not reduced, soon lead to fatal coma. In these latter cases, if we can succeed not only in lowering the temperature, but also in stimulating the nerve centres to a resumption of their functions, the patient will recover. Such cases are most frequently seen in acute rheumatism. In the zymotic fevers, as typhoid, extreme hyperpyretic temperatures, as 108° to 110° Fahr., commonly indicate a general paralysis of the nervous centres and impending dissolution.

The regulating function being thus weakened relatively or absolutely, and the temperature rendered more labile, we have now to consider what is the factor which causes the temperature to maintain itself above the normal point, mere liability being as likely to cause depression as exaltation. The liability, indeed, often continues longer than the fever; and very commonly, for some time after complete defervescence has become established, extremely slight causes, which would have no effect whatever in health, will send up the temperature many degrees.

The opinion generally entertained is, that the cause of the fever-heat is increased combustion of the tissues, which we have seen to be the most characteristic phenomenon of fever. But, although in fever the combustion is excessive in relation to the amount of fuel supplied by the food, it is not necessarily in excess of that which takes place in health, where the supply of food is abundant and the muscles are well exercised; and it has not been found possible to establish any definite relation between the discharge of urea and carbonic acid on the one hand, and the temperature on the other. Attempts have been made to clear up this point by estimating the amount of the dispersion of heat in fever: if this be lessened, the temperature may of course rise, though the production of heat be not increased, or even be diminished; if, on the other hand, the dispersion of heat be increased, and at the same time the temperature rise, it is evident that the production must be increased in a still greater degree. The results obtained by different experimenters are conflicting, but on the whole there can be little doubt but that for the most part the dissipation of heat is increased in fever. During the initial rigors, indeed, it is most probable that the dissipation of heat is much diminished from contraction of the cutaneous capillaries; and in all cases there is reason for believing that the dissipation as well as the production of heat is subject to very great fluctuations. Senator considers that periodic contractions and dilatations of the cutaneous capillaries take place, favouring the retention or dissipation. It is, however, quite conceivable that the balance may be disturbed in the other direction; the combustion, though increased relatively to the amount of food taken, may be actually below that in health, the dissipation may not be diminished in proportion, the labile temperature may yield readily to external conditions which favour cooling, and so we may have the paradox of an afebrile fever.

In the artificial septic fever produced by the injection of pyrogenetic substances, if small animals, as rabbits and guinea pigs, be experimented on, and if the temperature of the air be below 75°, and means be not taken to prevent the dissipation of heat, the temperature will fall below normal; if, on the other hand, the air be above 75°, or the animal be wrapped up in wadding, the temperature will rise to febrile heights. In larger animals, as dogs, the influence of the surrounding conditions is less marked, and under ordinary circumstances their temperature always rises; but if they be shaved and exposed to a cold atmosphere, then here also a fall takes place. Similar phenomena occur in the human subject, and many cases and even epidemics of typhoid have been met with in which the temperature has been subnormal throughout the whole course of the disease.

One such epidemic has been reported by Dr. Strube. During the siege of Paris by the Germans in 1870 an epidemic of typhoid fever broke out among the troops, beginning to show itself during the march to Paris, and attaining its greatest height in October. In November a decline

took place, which was followed by a fresh outbreak in December. These two outbreaks differed greatly in their characters: the later one resembled in all respects the ordiuary form of typhoid; the earlier one presented very different features. In many of the cases the temperature throughout was subnormal, and in others never exceeded the normal point. The roseola was unusually profuse; the nerve symptoms were of marked severity, and were in inverse ratio to the temperature, consisting of violent delirium alternating with stupor; the duration of the fever was very short, defervescence usually taking place at the end of a fortnight. Of the twenty-three fatal cases, in twenty death took place during the first fourteen days. The abdominal symptoms were slight, but the characteristic lesions were found on post-mortem examination. All the cases were characterised by great prostration. These cases presented some features which were probably due to this peculiarity of the temperature: thus, the pulse was but little accelerated, seldom exceeding a hundred; the tongue did not become dry and brown, and the enlargement of the spleen was either absent or much less marked than usual. Dr. Strube attributed the peculiar features of this epidemic to the depressed condition of the troops; they had been exposed to great hardships on the way to Paris, over-fatigued by forced marches, and very insufficiently supplied with food, and the supply continued deficient for some time after their arrival, owing to difficulties of transport. In the later outbreak these conditions were no longer present.

It now becomes an interesting subject of inquiry, whether the mode of production of heat is the same in fever as in health, *i.e.*, whether it is produced in the same organs and by the same kind of combustion.

The source of the animal heat is of course the combustion of the food and the tissues; wherever metabolism of food or protaplasm is going on, *i.e.*, wherever there is living tissue, heat is being set free. Hence every living cell of the body contributes to the production of heat; but heat is set free more abundantly in some organs than in others, and, taking the body as a whole, the principal sources of heat are the muscles and abdominal viscera, especially the liver, the temperature of the blood in the hepatic vein being the highest in the body. The heat set free by the muscles depends largely on their functional aetivity: when in exercise it is very great; when they are at rest it is small. The production of heat by the abdomiual viscera is probably much more constant, but is necessarily dependent on the assimilation and metabolism of the food.

Now, in fever the production of heat by the abdominal viscera, so far as it is due to the metabolism of the food, must necessarily be diminished in consequence of the restricted diet, and the production by muscular contraction is also much less than in health, as the muscles are for the most part kept at rest. As to how far the heat-producing functions of the liver and other abdominal viscera are modified in fever, little is known. It is possible that an increased production takes place in the spleen, which is so constantly found enlarged and softened, and where it is probable great disintegration of red blood-cells takes place. It is remarkable that in the cases recorded of apyretic typhoid this enlargement of the spleen was either absent or less marked than usual. With regard to the muscles, however, we have evidence that, notwithstanding the diminution of functional activity, the production of heat in them is very active. It has been found by direct measurements that while in health, when the muscles are at rest, their temperature is below that of the blood in the left ventricle of the heart, in fever it is higher, and both clinical and pathological observations show that the metabolism of the muscular tissue is greatly increased. Thus there is the great muscular weakness so characteristic of fever, the increased discharge of the salts of potash and of creatine and creatinine by the urine, and the various forms of degeneration found after death in fatal cases. We have, therefore, strong reasons for believing that the muscles in fever, though for the most part in a state of rest, are an important source of the febrile heat, and that this production of heat takes place at the expense of the contractile tissue, and not, as in muscular contraction, from oxidation of hydro-carbons. In fever also, though the voluntary muscles are kept at rest, it must be remembered that the heart and respiratory muscles are more actively exercised.

[*To be continued.*]

ORIGINAL COMMUNICATIONS.

OBSERVATIONS ON YAWS.

By LEWIS QUIER BOWERBANK, M.D., F.R.C.P. Edin.

During the last few months communications have appeared in this journal on the subject of "Yaws" (*frambœsia*), the writers being Dr. Gavin Milroy, F.R.C.P. Lond., and Dr. H. A. Alford Nicholls, M.D., Medical Superintendent of the Dominica Hospital, W.I.(a)

Differences of opinion have arisen between these gentlemen on certain points in the history and nature of the disease. In his last letter above referred to, Dr. Milroy thus writes:—"Surely Dr. Nicholls has misinterpreted and mistaken my views as to what part contagion may play in the origination and spread of Yaws. Nowhere have I denied or rejected its possible operation, nor have I propounded any theory of non-contagion. I have only stated, *first*, that the disease does not uniformly, or on all occasions, exhibit any very marked or decided contagious property; and *secondly*, that the idea of contagion being the sole factor in the causation of the disease is still very problematical, or in other words is an 'unverified hypothesis.'

"With respect to the *first* of the above propositions, the experience of Jamaica deserves to be known. For many years past, patients affected with Yaws have been received into and associated with lepers in the same asylum; and, indeed, besides these two forms of disease, cases of elephantiasis (Arabum) and other maladies are not unfrequently admitted into the institution. For example, in the latest Annual Report for 1879, we read among the inmates in the Leper Asylum, of two cases of 'chronic eczema,' one of 'anæmia,' one of 'scrofula,' and two children free from disease." "No instance of the communication of the Yaws to other inmates of the institution has, so far as I know, ever been recorded. If I am wrong, Dr. Bowerbank, to whom Dr. Nicholls justly refers as one of the chief authorities in the present day on this disease, and who, after forty years' active practice in Jamaica, is now resident in London, can correct me; and I would therefore strongly appeal to him to give the profession the benefit of his knowledge upon this point in the history of the disease in that important colony."

Called upon as I have thus been to give evidence on this point, I shall do so to the best of my ability. At the same time, I feel that to deal satisfactorily with Dr. Milroy's *first* proposition, it is necessary that his *second* should be first considered. This is—"That the idea of contagion being the sole factor in the causation of the disease is still very problematical, or in other words is an 'unverified hypothesis.'" From all I have seen, heard, and read of the disease of Yaws, I believe it never is, and cannot be, communicated from the diseased to the healthy, as small-pox, measles, scarlet fever, etc., through the medium of the atmosphere—*i.e.*, it is not infectious, as is measles. I have never seen nor heard anything to induce me to believe that this disease was hereditary, or that it, or a tendency to it, could descend from parents to offspring, as with leprosy. I have never seen or heard anything to induce me to believe that the disease could originate or be generated by dirt or filth, personal or domestic.

Most assuredly a dirty, unwashed person is more liable to suffer from sores and abrasions of the cuticle than a cleanly one, and so far is more apt to take the disease on exposure to its contagion. I have never seen or heard anything to induce me to believe that the origin or spread of the disease was traceable to the use of any particular diet or article of food—such as salted fish, pork, etc.—or that the disease could arise from any insufficiency as to the quantity of food.

There is no doubt that the progress and course of the malady itself is most materially influenced by the quality and quantity of food.

(a) "Observations on Yaws: its Contagiousness and the Importance of Improved Diet, as Preventive of the Spread of the Disease," by Gavin Milroy, M.D., F.R.C.P. (*Medical Times and Gazette*, October 11, 1879, pages 420-21); "Observations on Yaws" (a reply to Dr. Gavin Milroy), by H. A. Alford Nicholls, M.D. (January 3, 1880, pages 5 to 7;) "Observations on Yaws" (a reply to Dr. Gavin Milroy), by H. A. Alford Nicholls, M.D. (January 10, 1880, pages 33, 34); "Yaws: What are its Attributes?" by Gavin Milroy, M.D., F.R.C.P. (February 21, 1880, pages 201-2).

It has always appeared to me that a well-fed person and a half-starved person were equally liable to take the disease when exposed to the efficient cause. In fine, I firmly believe that Yaws never does arise, as the expression is, *de novo*, and independent of contact with an antecedent case.

From my personal experience and observation of the disease, I believe that Yaws is due solely to contagion; that it spreads or is extended from the diseased to the healthy (or those who have never previously suffered from the disease) entirely by contagion; and, further, I believe most firmly that contact alone is insufficient, but that in order to communicate the disease from a diseased person to another free of the disease, it is essential that the Yaws secretion or virus should be brought into downright and intimate contact with the true skin or mucous membrane, by an open sore or abrasion of the cuticle or epithelium. Such, I am sure, is the general belief in the island of Jamaica among those medical practitioners who have had the opportunity of treating this disease, as also of the lay population. If I mistake not, Dr. Dancer, the author of the "Medical Assistant of Jamaica," is the only medical practitioner and writer on Yaws in that island (and they have been numerous) who maintained that an abrasion of the cuticle or wound did not appear absolutely necessary; "the matter applied to the surface is sufficient." On this statement Dr. James Maxwell, in his observations on "Yaws, and its Influence in Originating Leprosy," published in 1839, remarks: "It would require something more than bare assertion to invalidate the united testimony of the medical men of the present day, who are unanimous in opinion that Yaws can be communicated in no other way than through the medium of an abraded cuticle."

This fact is deeply impressed on the minds of the Creole nurses in Jamaica, many of whom, who have never had the disease themselves, do not in the least hesitate to take charge of Yaws patients, so long as their own bodies, especially their hands and feet, are entirely free from sores or abrasions of the cuticle.

We may now, I think, pass on to Dr. Milroy's other proposition, "That the disease does not uniformly, or on all occasions, exhibit any very marked or decided contagious property," and in support of which he refers to the experience of Jamaica, and especially to the "happy family" located in the Lepers' Home of that island as represented in the Annual Report of 1879, observing: "No instance of the communication of the Yaws to other inmates of this institution has, so far as I know, ever been recorded."

I need hardly remind the reader that no contagious disease with which we are acquainted (and the attribute of which in this respect is undoubted), not even small-pox or syphilis, does uniformly or on all occasions affect those exposed to its influence. Some persons, though frequently during a long life exposed to these contagions, resist them; while others, though they resist it at one time, take it at another.

Yaws and cow-pox are both received into the system in the same manner, namely, only by the application of a contagious secretion to the true skin by means of a wound or abraded cuticle. In neither case will mere application of the secretion to the unbroken cuticle succeed.

Vaccination is not always successful or uniform in its result. Why, then, should the contagious property of Yaws be denied or doubted because it does not uniformly or on all occasions exhibit its contagious property even when a sore is purposely inoculated with it? Who ever doubted the contagious attribute of cow-pox, in spite of its occasional failures?

In vaccination the latent or incubative period is very brief. If the operation has been successful the result is speedily visible—the cause and effect cannot be mistaken. Not so with Yaws; here the latent period is very much longer, varying, I believe—according to the experiments of Drs. James Thomson, Mason, and Robertson,—in most cases from six weeks to three months; besides which, if the recipient wound or abrasion through which inoculation took place is very small, as it often is (a simple scratch, a chigoe or tick wound), it at once heals up without irritation, and the whole affair is forgotten before the constitutional precursive symptoms, as febricula, or the "*Yaws Cacca*," make their appearance, to be followed by the characteristic appearances of Yaws.

Dr. Milroy is perfectly correct in his statement as regards the Lepers' Home. The law establishing this was passed in 1865, but there was much delay in carrying out its provisions. I know but little of the present institution in Spanish Town, as it was erected after I had left Jamaica; but in the previous one at Healthshire in 1872 I heard it distinctly stated, by the medical attendants and other persons in charge, that not a single instance of the extension of Yaws to the other inmates had ever occurred there. The Act of the Legislature regulating the establishment of the Lepers' Home of Jamaica, I have always considered very unsatisfactory and defective; and, being a member of the House of Assembly at the time of its introduction, I opposed it, but in vain. It provides that "all cases of leprosy, Yaws, and other akin diseases" should be admitted or sent there, without any provision, for the segregation or isolation of contagious diseases from non-contagious among its inmates.

Did space permit, I would here describe the provisions made for persons afflicted with Yaws previous to the emancipation in 1838, both as regards slaves and free people, and would explain how scanty and defective were the provisions, on the part of the Government, for the reception of these unfortunates in the prisons and workhouses.

Owing to the undoubted almost total disappearance of Yaws from the island within eighteen months after August 1, 1838, even these imperfect arrangements, for the reception of persons so affected in prisons and workhouses, were removed and done away with as unnecessary.

Since this, from downright necessity, Yaws cases have been occasionally received into the different public institutions, on each occasion the officers in charge taking such temporary measures as they could for isolation of the cases; but in most, if not all, such instances these have been very defective, and generally caused much inconvenience. Nevertheless, in no instance in which this has been done, could I, on inquiry, ascertain that the case received had spread the disease to any other inmate of the institution, except in the following two cases. One occurred several years back in the Old Parochial Asylum of Kingston, into which, before the establishment of the Lepers' Hospital, all *unsightly* diseases as "leprosy, Yaws, and other akin diseases" (a regular Pandora's box!) were received. On investigation it was found that a black man, suffering from Yaws, had wilfully given a Chinaman or Coolie, suffering from a simple ulcer of the foot, a rag soaked in his Yaws secretion wherewith to dress his ulcer, which caused great irritation, and, in due course, most effectually inoculated the poor fellow with Yaws. Again, at a more recent inquiry into the working of the Boys' and Girls' Reformatory, in the parish of St. Andrews, it distinctly came out in evidence, that a case of Yaws had been in the institution (the disease was then prevalent in the neighbourhood), which had extended to other inmates. Here for months previous and subsequently the male inmates had been suffering severely from sores on the feet, induced by chigoes and by the knife-like edges of the honeycomb limestone rock among which they were working. The existence of the first case or two was doubtless hushed up, and the sufferers were subsequently removed, and treated near by, but out of the institution, instead of being sent to the Lepers' Home. I have not heard whether the disease at the Reformatory has been further extended or not.

I repeat, with the exception of these two cases, I do most fully confirm Dr. Milroy's statement; and, further, I have no hesitation in stating that I have never known of a nurse being attacked with Yaws while in charge of a case of the disease.

In fine, for years past, in the absence of any proper provision for the reception of Yaws patients, sheer necessity has taught the people of Jamaica that a few cases of the disease may be treated in the same ward or room with other patients suffering from other diseases, without the disease extending itself; but in these cases great vigilance is requisite on the part of those in charge, to see that strict decency and cleanliness, and certain other precautions, are duly enforced—in fact, in the same manner as syphilitic patients are sometimes treated in general hospitals.

In all such cases we must receive statements with caution, weighing well the evidence as to the length of time the Yaws patient mixed with the others, and always bearing in mind the length of the latent period of Yaws.

From all I know and have seen of Yaws, I certainly do not think any Government is justified in running the risk they

certainly do, in placing Yaws patients in any of the public institutions to mingle and communicate with the other inmates; and it is with pleasure that I find the Government of Jamaica has now erected a contagious ward or detached building in the lunatic asylum, and isolated and separate cells in the Spanish Town prison, for the reception of prisoners sent there suffering from contagious maladies.

From reports from all parts of the island, Yaws is again on the increase, and it behoves the Government to take the matter in hand before it becomes too *bad*, and to act with promptness and firmness. In their report for the year 1851, the Central Board of Jamaica (of which I was a member), although the disease was then vastly reduced, urged the Government to establish Yaws hospitals, and to enforce isolation of the diseased. In 1857, when there was an undoubted increase in the number of Yaws cases, the Royal Society of Arts, composed of some of the most influential gentlemen of the island, presented a memorial to the then Governor (Sir Charles H. Darling) and his Executive Committee, on the then unhealthy condition of the city and parish of Kingston, enclosing a sanitary report on the same, drawn up by Dr. Charles Campbell and myself, in which we stated:—

"That it is an undoubted fact that leprosy or elephantiasis is greatly on the increase in this city, and that at present no proper provision exists for the seclusion or segregation of those who may even desire it. We would observe, also, that occasionally a case of Yaws presents itself, and that the unfortunate sufferer becomes an outcast. No hospital will receive him, and he is shunned and avoided by all."

Again, in 1872, in my replies to the Questions on Yaws issued by the Earl of Kimberley, H.M. Colonial Secretary, and published in the Report by Dr. Milroy, to the question, "Do you consider that *enforced* or *compulsory* segregation and isolation of the sick (Yaws patients) are necessary to prevent the spread of the disease?" I reply, "I believe that if an honest, well-disposed person is unfortunate enough to catch Yaws, he may be treated in a house with other healthy persons without any risk to them (due care being taken); but when we have to do with lazy, reckless persons, perfectly regardless of their own welfare, and of that of others, or a number of unwashed children—especially sleeping together at night, as the custom is, in a state of perfect nudity,—nothing but *enforced* segregation and isolation will prevent the disease from extending itself to other persons, and thus from one place to another."

"From the country districts we learn that Yaws is on the increase, especially in certain villages or townships, in which we are told there are regular colonies of Africans relapsing into all the barbarisms of their native condition. In these cases I see no remedy but for the Government to interfere, and to enforce isolation of the affected, no less for their own good than for the public welfare. Wherever the disease is found to prevail, a lock hospital (another mild or delicate name for a prison) should be established, and under stringent rules. All affected persons of the lower orders, or from overcrowded houses, should be removed and be treated, and kept in the lock hospital till completely free of the disease. In other cases occurring among more respectable persons, whose houses are not overcrowded, isolation of the individual should be insisted on under a heavy penalty, and in case of breach the person should be removed to the hospital or lock."

"The Government of Dominica have, in consequence of the increase of Yaws in that island, adopted such measures. I think the Government of Jamaica, if it is distinctly proved that Yaws is on the increase, and *mainly* through the fault of the people themselves, ought to do the same."

The above concluding remark has reference to a subject connected with Yaws which has, I think, been most singularly passed over by the majority of writers on the disease. I allude to the practice of inoculation for Yaws—"buying the Yaws"—an undoubted custom among some tribes or nations in Africa, as is distinctly shown by Bryan Edwards, the historian of the West Indies, and one which was most certainly pursued in Jamaica up to the time of the emancipation in 1838, with two objects in view: the first a salutary one, performed with the same intention as small-pox inoculation was; the second for the purpose of producing the disease, so as during its existence to avoid hard work, and to be admitted an inmate of the Yaws hut, to share the *privileges* of those on the sick list of the property. These latter inducements, of course, ceased after the emancipation, when the free man was thrown on his own resources.

In no other way can, I think, the steady continuance, and the sudden cessation of the disease in Jamaica be accounted for; and even in these days it will alone account for the behaviour of the disease, especially among the colonies of Africans located in the almost deserted districts of Jamaica, who are described by competent persons as fast relapsing into their native barbaric customs. As I am not likely ever again to resume the study of this most interesting, but I fear as yet little understood, disease, I would urge my younger brethren, who have the opportunity, to study well with the microscope the Yaws ulcer, protuberance, and tubboe. In that comparatively rare form of the disease known in Jamaica as "*Memba Yaws*," I have reason to believe a parasitical growth exists. Certainly I have met with a growth of defined shape and size, of a light yellow colour, and in appearance like the seed-capsule of the melocactus. *What is this?*

In studying the disease of Yaws in the West India Islands, the previous history of the particular island should be taken into consideration. Thus I believe that the alleged differences in the history of this disease in different islands may be best explained. I hear that of all the islands Barbadoes and Antigua are said to have been the longest free of the disease. On inquiry I believe it will be found that these two islands have had comparatively the largest Creole population, and therefore have imported fewer Africans in comparison than the others.

From existing documents it would appear that during the slave trade, and while Africans were imported as slaves, 800,000 and upwards were estimated to have been landed in Jamaica, of which something like 130,000 were reshipped to the other islands.

Dominica has for some years past been suffering from this disease—chiefly, I believe, among its black and coloured population—and, in spite of isolation and segregation, the disease still keeps its hold. A few years ago, a gentleman connected with the planting interest of the West India Islands assured me that, in the island of Grenada or St. Vincent, coolie immigration was quite crippled by the ravages of this disease. Surely these facts must admit of some explanation. I think that during recent years, more Africans have been imported into Jamaica by means of captured slavers, than into any other island. I know that in 1857 the *Arab* landed upwards of 200 young persons at Fort Augusta, close to Kingston, who were afterwards distributed in different parts of the island. Among these many cases of Yaws subsequently appeared.

The Vivisection Question at New York.—A Bill having been introduced into the Legislature of the State of New York for the prohibition of vivisection, memorials were addressed to that body by the various medical societies, universities, and medical colleges of the State, setting forth in temperate language the great benefits derived from experiments upon animals, the absence of cruelty in their performance, and the great mischief likely to ensue from abrogating the law of 1867, which was passed after full and deliberate consideration for the purpose of sanctioning these investigations. The Bill has since been rejected.

Waterproof Paper.—In the *Boston Medical Journal* for November 27 it is stated that Dr. Keen, of Philadelphia, has after many trials succeeded in having fabricated, by Seabury and Johnson, of New York, a paper coated with a combination of paraffin and caoutchouc. It is expected that the "waterproof paper" thus produced will supersede everything of the kind, being far superior in its qualities and far less expensive than oiled silk, oiled muslin, taffeta oiled silk, paraffin paper, waxed paper, and gutta-percha tissues. It is impermeable to water after an exposure of at least seventy-two hours, and even after being repeatedly crushed and crumpled in the hand; it is impermeable to air even when bruised; it does not absorb water or discharges; it may be used with the hottest dressings that can be borne; although very flexible, it is strong enough for all ordinary wear, especially since it will be used only once; and its cost is many times less than that of similar dressings, the price being four dollars for a roll of a hundred yards. In the Lister dressings it will prove very economical as a substitute for the mackintosh cloth.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

CHARING-CROSS HOSPITAL.

[For the following notes we are indebted to Mr. Hayward Whitehead, Surgical Registrar.]

MELANOTIC SARCOMA OF THE CHEEK IN AN OLD MAN.

(Under the care of Mr. BARWELL.)

James K., aged seventy-nine years, was admitted on January 27, 1880. Patient was formerly for twenty years in the Fusilier Guards, and left the service in 1841 as a sergeant with full pension. Since then he has always enjoyed good health, and has always led a very temperate, abstemious life. He has been in the habit, he says, of living on sixpence a day, and of late years has hardly ever touched meat. About two years ago he first noticed a brown spot appearing on the left side of his face just under the malar protuberance. This spot gradually increased in size until date of admission here. Lately it has bled a good deal, especially at night, and in that way has given rise to some trouble, but it has in no other way interfered with patient's comfort and health, nor with his power of eating or talking. He does not remember to have had any mole or other point of irritation on that side of the face before the appearance of the tumour.

On admission, patient is a very thin but apparently well-preserved man for his years. Over the left superior maxilla there is an oval tumour, raised about a quarter of an inch above the level of the skin. It extends somewhat obliquely from a little below the external angle of the eye to near the corner of the mouth. There can be felt no swelling in the corresponding part of the inside of the mouth, and the skin about seems to be in no way affected. There are no enlarged glands in the neck or elsewhere. The tumour feels firm, and it bleeds very readily on slight handling. In other respects patient seems to be well; his appetite is good, and heart and respiratory organs are fairly sound.

January 29.—To-day Mr. Barwell made an oval incision round the tumour, and dissected it out. The edges of the wound were then brought together by means of sutures. Patient was under the influence of ether during the operation, and did not lose much blood and rallied well.

30th.—Patient has not passed a good night, and is very weak to-day. The pulse is rapid and hard. There is considerable swelling about the wound and in the upper lower eyelid of the left side. Stimulants have been ordered, but patient has conscientious scruples on this point, as he is a teetotaler, and will not take what is offered to him.

31st.—Patient steadily refused to take stimulants and most of the nourishment ordered, and after passing a very restless night, and the weakness progressing, died at 7.20 a.m. to-day.

Post-mortem, no abnormal appearances beyond the ordinary senile changes in the heart and vessels were found.

The tumour, after being hardened in alcohol, was found on section to present to the naked eye a homogeneous and compact appearance, and to be studded over with patches of pigment. Under the microscope the growth was seen to consist of a small-celled structure, the cells being as large to twice as large as white corpuscles, somewhat oval in shape, and pointed at the ends. These cells stained easily with carmine and were nucleated. There were numerous other cells of similar shape, but loaded with pigment granules. There was very little fibrous tissue in the substance of the tumour, but at its margins fibres were plentiful.

EPITHELIOMA OF THE TONGUE—REMOVAL.

(Under the care of Mr. BLOXAM.)

The following case is interesting chiefly from the fact that it was under notice six years ago, when there was no reason to suspect that the tongue was the subject of malignant disease. It presented then, however, a peculiar appearance, which was observed by Mr. Fairlie Clarke, who examined the patient, and whose notes of the case are given below.

Frederick S., aged forty-nine years, formerly a sergeant-major in the Guards, now a military staff clerk, was admitted on January 19, 1880. Patient has been married twenty years; he has five children alive and well, three died of scarlet fever; his wife has miscarried twice. When seventeen years of age he had one chancre on the penis, but does not remember having suffered from any secondary symptoms. Many years ago, however, he was under the care of Mr. Hancock at this hospital, with what was described, he thinks, as rheumatic iritis. He has always been a very temperate and well-living man. He acknowledges now to having been a great smoker. He states that for the last fifteen years his tongue has always been white and coated, and doctors had told him it was only a smoker's tongue. Until last July (1879) he never had any sore or crack on his tongue, but about that time he noticed that when he smoked there was considerable smarting in the region of the present sore. He continued to smoke, but used honey and borax for the affected part, and this application gave him some ease. About September he began to feel as if his tongue had been burned and laid bare, and he lost the flavour of light tobacco and took to smoking stronger. The sore has gradually increased in size since that time, and has become thicker at its edges and base. No special local treatment was adopted by his family doctor who attended him, but patient took medicine containing, he thinks, iodide of potassium and quinine. He has not lost flesh or felt ill, but has been rather depressed in spirits lately.

The following additional details of this case have been obtained through the kindness of Dr. Fairlie Clarke from his notes taken in 1874:—"Patient is the subject of writer's cramp, for which he is now attending Dr. Poore. There is a patch of tylosis (the so-called ichthyosis) situated on the dorsum of the tongue; it is chiefly to the right of of the median raphe, commences a little behind the tip, and extends somewhat obliquely backwards and towards the edge of the tongue; it extends very slightly to the left of the median line. This patch is thickest near the raphe, and gets thinner towards the outer and posterior borders. At present it is of a pearly whiteness, but patient states that when his stomach is disordered it becomes yellowish. The surrounding parts of the tongue are remarkably sound and natural. There is no induration anywhere. Patient is a constant, though not a great smoker. This condition of parts, he says, has existed for nine or ten years, but has never given him any uneasiness, and Dr. Poore has sent him to me as a matter of professional interest, as patient himself has had no tongue-symptoms that would lead him to seek for advice."

On admission, patient is spare, but well nourished, and does not look more than his age. There is no appearance of cancerous cachexia; he is a clear-headed, intelligent man. There is an ulcer situated altogether on the right side of the median raphe of the tongue; it is about an inch and a half from the tip, and about as large as an almond. The ulcer is not raised, but is surrounded by a hard base for some distance, and the hardness can be felt passing into the substance of the tongue. On the right side there is a thick covering of white creamy fur; on the left side there is a similar covering somewhat yellowish in colour. There are no enlarged glands to be felt anywhere in the neighbourhood of the growth.

On January 29, Mr. Bloxam removed the right half of the tongue, getting well beyond the seat of induration. Patient made a very rapid recovery, and was able to leave the hospital on February 16. He could then articulate well, and was able to masticate and swallow his food. A month after leaving the hospital he was pretty much in his usual state of health.

On microscopic examination the tissues near the ulcer were found to be full of epithelial nests, and the muscular substance was replaced for a considerable distance by a small-celled new growth resembling granulation tissue.

TWO CASES OF CARCINOMA OF PENIS—AMPUTATION.

(Under the care of Mr. BLOXAM.)

Case 1.—James L., a tailor, aged sixty-four years, was admitted on February 23. There was no history of cancer in his family; his mother, three sisters, and one brother died of phthisis. Patient states that he has always enjoyed good health, although he has never been robust or capable of doing hard work. He has been married for five-and-

twenty years; his wife has miscarried twice, but has had no children born alive. For the last two years he has been unable to have connexion. About a year ago his sight began to fail him. He had gonorrhœa thirty years ago, but has never had syphilis. About six months ago his attention was directed to the penis on account of the difficulty of micturition and pain in the urethra. The glans was then red and swollen, and a thick discharge came from under the foreskin, which has always been phimosed. The inguinal glands were not then enlarged. Since that time he has lost flesh rapidly, and his health has become bad. He cannot in any way account for the appearance of the growth.

On admission, patient has rather a florid complexion, but looks careworn. He is emaciated about the limbs and body. Arcus senilis is well marked. The end of the penis is enlarged to about the size of a hen's egg. The prepuce covers the glans. A thick yellowish discharge escapes beneath the prepuce in small quantity. The lips of the urethra when exposed are seen to be enlarged and raw, and are painful on pressure. The growth is hard, circumscribed, and slightly uneven to the touch. The superficial inguinal glands are not enlarged, but some swelling can be felt, on deep pressure, in the iliac region. Patient says he is not in any pain when he is at rest, but when he moves about he suffers a good deal with pain of a bearing-down character. He sleeps well, and his appetite is good.

February 26.—To-day Mr. Bloxam removed the penis close to the pubes. The skin-flaps were cut about half an inch longer than the corpora cavernosa, and were stitched together; the urethra, which was also left long, was stitched to the skin.

27th.—The stump looks well to-day. There was some recurrent hæmorrhage last night, which at first ceased of itself, but afterwards recommenced, and had to be checked by tying some bleeding points. No sickness followed the operation. Temperature yesterday evening, 100·1°; this morning, 98·4°.

28th.—Temperature rose in the evening to 103°; but the patient had no rigors. He has no difficulty in micturition, and seems to be getting on well.

March 5.—The wound has nearly healed, and the patient was up yesterday.

8th.—The patient was discharged to-day, feeling quite well.

On microscopic examination, the growth was found to consist of large oblong alveoli filled with cells of an epithelial type. There was a very scanty matrix of fibrous issue round about. Towards the periphery of the growth there was a good deal of infiltration by a new small-celled growth.

Case 2.—Henry W., a labourer, aged fifty-nine, married, was admitted on March 11. There was no direct history of cancer in his family. His mother died of old age; his father died in 1834 of some internal tumour. Patient has always been of a weakly constitution, but has not suffered much from illness. He had rheumatic fever in 1845; he has never had a chancre or gonorrhœa. In March, 1879, he applied to the Lock Hospital, complaining of a discharge and of swelling of the foreskin, which had always been redundant and covered the glans. He was then informed that the condition was the result of impure connexion, and the prepuce was removed. The parts did not heal kindly, and ever since there has been more or less discharge and slight excrescences have appeared from time to time, and increased gradually in size until date of admission. He has never had any difficulty in micturition. Lately he states that he has lost flesh rapidly, but he thinks he has been losing flesh for the last two years, more or less. For the last six months he has suffered from a cough. Finding that he had great pain in the penis and aching in the iliac region, he applied again for relief to Mr. Bloxam.

On admission here the whole glans penis is covered with warty excrescences, and a thin offensive discharge is oozing from the surface. The glands in the left groin are enlarged, but not painful. There is a fistulous opening into the urethra, just below the glans. Patient is an emaciated, unhealthy-looking man, and is at present suffering with somewhat acute bronchial catarrh.

March 11.—To-day Mr. Bloxam amputated the penis near the root. The skin-flaps were made long and brought together in front so as to form a covering for the corpora cavernosa, and the urethra was also cut long and attached all round to the lower part of the skin flaps. There was very little hæmorrhage.

12th.—He has passed a good night and is now in no pain whatever. The stump looks well. Morning temperature 100°, evening 102·2°; pulse regular.

14th.—The wound is almost healed, and patient seems to be well. Temperature in morning 99°, evening 100·3°.

18th.—The wound has almost completely healed, and patient will leave the hospital in a day or two. His cough is troublesome.

24th.—Patient leaves to-day. The wound is quite healed. The stump is a good one, and micturition is easily accomplished. The growth on examination proved to be epitheliomatous in structure.

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Medical Times and Gazette.

SATURDAY, APRIL 3, 1880.

THE INTERNATIONAL MEDICAL CONGRESS.

As we last week stated would take place, a meeting of "The General Committee of Delegates," to consider the subject of holding an International Medical Congress in England, was held on Tuesday last at the Royal College of Physicians, London. About eighteen delegates were present. The University of Oxford was represented by Dr. Acland, and that of Cambridge by Dr. Paget; Edinburgh University sent Dr. T. R. Fraser; Aberdeen, Dr. Robert Smith; and Dublin University, Dr. Hudson. The delegates of the Colleges of Physicians of London and Edinburgh were their respective Presidents, Dr. Risdon Bennett and Dr. Haldane; and Dr. Risdon Bennett presided over the meeting. The English College of Surgeons was represented by Mr. Luther Holden, the Edinburgh College by Mr. Imlach, and the Irish College by Dr. Colles; and Dr. Buchanan attended on the part of the Faculty of Physicians and Surgeons of Glasgow. Mr. Huxley represented the Royal Society; and the Royal Medical and Chirurgical, Pathological, Clinical, Obstetrical, and Epidemiological Societies nominated as their delegates their respective Presidents, of whom Dr. Headlam Greenhow, Dr. Playfair, and Sir Joseph Fayrer were present at the meeting. Dr. Graham Balfour was also present as representing the Army Medical Department; and Dr. A. Carpenter as a dele-

gate of the British Medical Association. Sir Joseph Fayrer represented, we believe, the Indian Medical Service as well as the Epidemiological Society. The University of London has intimated its approval of the proposal to hold the Congress, but did not nominate a delegate to the meeting, nor had any delegate been nominated by any of the following bodies:—The Universities of St. Andrews, Glasgow, or Durham, the Queen's University in Ireland, the Royal Society of Edinburgh, the Medical Department of the Navy, or the Apothecaries' Hall in Ireland. The Apothecaries' Society of London appointed Mr. Hainworth as their representative, but he was not able to be present. The Committee first resolved that an International Medical Congress shall be held in London in 1881; and then proceeded to consider at what period it shall be held. Communications had been received on this subject from various authorities on the Continent; and after much consideration as to the time of year that would be most convenient for the eminent visitors hoped for, as well as for British men of science, it was decided that the Congress shall be held at some time between October 4 and 15, 1881. For the purpose of carrying into effect the design of the Congress, it was resolved that a General Committee be formed, consisting of all the delegates, with power to add to their number, and authorised to make the necessary arrangements for organising and conducting the Congress: the Committee to report from time to time, as may seem necessary, for the information of the various bodies represented by the delegates. In order to provide the necessary funds for defraying the expenses of the Congress, it was decided that each member of it shall contribute one guinea.

The project of the Congress is now thus fairly launched, and we cannot doubt that the profession individually and as a body, and all the universities, corporations, and learned societies, will do their utmost to make it a brilliant success. The General Committee will, of course, ere long appoint various sub-committees to organise the details of the meeting; and they exercised their powers, before separating on Tuesday, by resolving at once to invite the following gentlemen to join them, viz.:—Mr. Bowman, Dr. Matthews Duncan, Dr. Farr, Sir William Gull, Professor Humphry, Sir William Jenner, Mr. Lister, Mr. W. Mac Cormac, Sir James Paget, Professor Rolleston, Dr. Sieveking, Mr. Simon, Dr. Storrar, Dr. Allen Thomson, Dr. Herman Weber, and Mr. Erasmus Wilson.

THE OUTBREAK OF SO-CALLED TRICHINOSIS ON BOARD THE "CORNWALL."

We have just received an important report,(a) made to the Medical Department of the Local Government Board, by Mr. W. H. Power, on the outbreak, which caused so much interest at the time, on board the school-ship *Cornwall*. This vessel lies off Purfleet, and has more than once been the scene of outbreaks called typhoid and enteric fever. On the occasion of one of these, application was made to the Local Board for an inspector, and Mr. Netten Radcliffe was deputed to that duty; but circumstances did not admit of his carrying out the investigation, and Mr. W. Power was delegated to continue it.

On September 23 of last year some of the boys, who had been previously in good health, fell ill one by one, or at first in batches. In some the attacks were severe, in some slight, but in most of them the temperature was high, sometimes as much as 105° Fahr. In all there were forty-three cases. Of these eighteen were severe; the remainder slight. The complaints at first were of pain in the belly, nausea and distaste for food, brownish-white tongue, and disordered bowels. In some there was vomiting. Diarrhœa speedily set in in all. The motions, which at first were brown, became loose and yellow. In some there was delirium. In all cases there was abdominal tenderness, in some localised specially in the right iliac fossa. In several there were rose spots, in all respects similar to those of enteric fever, even coming out in successive crops. In two there were bloody evacuations.

The dates are not very distinct; but it is worth noting that the severe symptoms set in at once with vomiting, purging, and pains in the epigastrium, immediately succeeded or accompanied by rise in temperature. This seems to have been the characteristic mode of onset, and the conclusion at first arrived at was that the symptoms arose from simple gastric disturbance. The pyrexia was severe, and in several cases long continued. This would eliminate the first simple solution; but the temperature charts are far from characteristic of typhoid, which was the next suggestion. Nevertheless, to support this view, notwithstanding the peculiar mode of onset, there were the facts of the fever, abdominal tenderness with tympanites, diarrhœa, and in three cases hæmorrhage, eruption of spots, and a tendency to relapse. As a consequence of the fever there were sordes in the mouth, deafness, and delirium. There was also a tendency to pulmonary complications. But, most curious of all, Mr. Mortimer de Brent, the medical officer to the ship, in an appendix to the report from which the above notes are taken, writes: "Jaundice occurred during and after the outbreak in some dozen boys, few of whom had even trifling indisposition."

Mr. Power set to work earnestly, and, by the process of exclusion, arrived at the conclusion that there was no cause to be discovered which would account for an outbreak of typhoid, even if such an anomalous complaint could be ranked under any such head. And he seems to labour under the notion that there can be but two forms of continued fever—typhus and typhoid,—the latter apparently, according to his creed, originating in one way only. So he proceeded still further to eliminate various factors, and got a clue which one might have thought would have been caught up at first—that the mischief had something to do with food,—and at last he came to associate it, in his own mind, with certain barrels of salt pork: though why this should be the case is not quite clear. Boiled salt meat was used by the boys on Mondays, and the first outbreak, renewed a week after, was on a Tuesday. The use of this particular salt pork (which was American), however, could not be traced to any exact time, further than that it was about the period of the outbreak. Having once got or invented this clue, Mr. Power proceeded to verify his idea of trichinosis by an examination of the dead body of the boy who had died three months and more before. This boy had had bloody stools, but no trace of the source of the bleeding could be found in the body; and though Mr. Power is very decided as to the negative appearances as regards typhoid, Dr. Corry, who was associated with him in this part of the investigation, seems to have been much less so. This is what he says: "The intestines were decomposed internally, and their mucous membrane stripped readily from the subjacent tissue. Here and there the mucous membrane had disappeared. The bowel contents were extremely offensive, and in an advanced stage of decomposition." Nothing more distinct than this, though elsewhere Mr. Power says that the mesenteric glands were not enlarged and there were no signs of peritonitis. But they found what apparently Mr. Power looked for—trichinæ, we suppose they must be called,—one described as living, none encysted, and many in what we may be excused for calling the larval

(a) "Report to the Local Government Board on an Outbreak of 'Fever' *that proved to be Trichinosis* on board the Reformatory School-ship *Cornwall*." By W. H. Power, M.R.C.S.

state. Mr. Power was apparently satisfied, if nobody else was, and then proceeded further to elaborate his argument. He had fixed upon salt pork, and upon one particular cask of pork weighing 224 pounds. The attacks began at intervals during exactly a month, and then ceased to appear. Thus, to make the theory complete, the use of this salt pork should have been proved to extend over a similar period, but this could not be done. By his own conditions, Mr. Power seems to bind himself down to the use of this particular salt pork on Monday, and the commencement of the illness next day or Wednesday; but this could not be absolutely confirmed. The question would next arise, why such a small number were attacked, comparatively speaking, out of so many; or, to reverse it, why so many were attacked, with such variable results and endings? Mr. Power gets out of this difficulty by pointing out that the pork consisted entirely of flank pieces; consequently, some may have been trichinised, and others not: but the proportion of diseased pigs must have been curiously large to have given rise to such results. Be it noted that this pork was never examined microscopically; at least, no trichinæ were found in the various fragments of pork which remained in the cask whence the ordinary supply was taken. Then comes another difficulty, where Mr. Power's argument cuts underneath his own feet. It has heretofore been believed that exposure of the diseased meat to a temperature of 212°, even for a short period, would destroy these parasites; and to believe that even well-cooked meat may still contain them in a living and active state is certainly a most unpleasant idea. Now, on board the *Cornwall* the salt meat is put into boiling water at 8.30, and kept boiling, or as nearly boiling as may be, until 12.30—*i.e.*, four hours. Surely one would think this long enough to destroy any parasite whatever! But says Mr. Power, "a mass of salt meat may be overdone outside, and underdone inside." To this we would reply that it may be true of great masses of meat, but in this instance, according to theory, we have to deal with thin flank pieces only. On this ground alone we cannot help thinking that the case breaks down completely.

But the argument is still more fatally ruined by the fact that the boy who died, and in whom alone trichinæ were found, received from his mother some time in August a piece of roast pork, on a portion of which mother and sister had previously dined. True, neither mother nor sister were apparently affected, but that proves no more than the other fact of the great majority of the boys on ship board also escaping, supposing the ship's pork to have been trichinised.

Finally, though trichinæ were found in the dead body of the boy, it is not proved that they were the cause of death. Very far from it. No one symptom pointed to trichinosis; and we question if there was one for which the presence of trichinæ would account. The only logical conclusion is this—the boy died whilst the subject of trichiniasis, and the introduction of the parasites could have been of no very distant date, as none were found encysted.

There is no one symptom narrated as occurring in the outbreak which points distinctly and unmistakably to trichinosis. Above all, that eating trichinised pork on Monday should, through the medium of trichinæ, produce such symptoms as are recorded next day, seems absurd. That bad pork might do so we can easily understand, but the agency of trichinæ is purely hypothetical. What the nature of the outbreak was we do not pretend to say: probably it was of a mixed character; certainly the cases were not of a uniform character, except probably in their mode of onset. Nor can we overlook that very peculiar and interesting feature, the prevalence of jaundice among the boys, with little constitutional disturbance. We should hardly be prepared to accept this as a true indication of trichinosis.

In conclusion, we cannot but congratulate Mr. Power on his diligent and unwearied search after causes; nor can we overlook his ingenuity in fitting one thing into another; but to arrive at sound conclusions the rule should be "*non hypotheses fingo*," and here far too much is theoretical. We cannot, therefore, think that Mr. Power is justified in calling this outbreak one that "proved to be trichinosis," for we hold that there is no shadow of proof to this effect. The mere finding of trichinæ in one dead body may furnish a basis for supposition, but is proof of nothing beyond their discovery.

THE INDIAN MEDICAL SERVICE.

Our readers will recollect that, in our number for March 6, we published in full the new regulations affecting the Indian Medical Service, as promulgated in an Order recently issued by the Government of India. We also, in the same number, expressed our surprise at the very precipitate and autocratic manner in which the new system of military medical administration in India is to be inaugurated, and we pointed out how very seriously the new regulations must affect the prospects of the present officers of the Indian Medical Service.

The whole scheme has certainly not risen in our estimation on further examination. To-day we publish two letters from correspondents well qualified to speak on the subject. They repeat the same objections as we ourselves had adduced, both to the details of the scheme and to the very high-handed, not to say illegal, manner in which it is proposed to enforce it. Surely the officers of the Indian Medical Service deserved better at the hands of the powers that be, than to have their just expectations rudely blasted, almost at a moment's notice, and that too by means which not only contravene the regulations under which the officers entered the service, but which also, to non-official minds, seem to go in direct contravention of the Act of Parliament under which the administration of India was transferred from the East India Company to the Crown.

It is one of the most objectionable features of the business that not the slightest intimation of the proposed changes was made, either to the last batch of young surgeons who have just left Netley for India, or to those who recently came forward for the competitive entrance examination for the Indian Medical Service. We cannot but think that those who are responsible for this Order have not realised as they ought to have done the full effect of the proposed changes on a Department uniformly distinguished by its high professional efficiency and by its devotion to the duties assigned to it.

But while we have no hesitation in condemning the details of this new scheme of medical military administration in India, and the precipitate manner in which it has been promulgated, we at the same time wish to express again our approval of the suggestion that the Indian Medical Service should be amalgamated with the (British) Army Medical Service. There is no necessity for repeating here the many arguments against the dual system of medical military administration at present made use of in India. But surely the amalgamation could be accomplished gradually and in such a manner as not to interfere materially with the prospects of the present members of the Indian Medical Service.

We would direct the attention of our readers to the letters published elsewhere. We have also received a copy of a document drawn up in connexion with an "Indian Medical Service Defence Fund" which has been established as the result of the new Government Order we have been criticising. This document takes the form of a "Notice to Medical Students," and sets forth very clearly, for the information of students and young surgeons, the very altered position in

which the Indian Service is now placed as compared with the (British) Army Medical Service.(a)

Thus, it is pointed out, that on passing out of Netley, the British Army Surgeon immediately ranks as Captain, while the Indian Surgeon ranks only as Lieutenant for a period of six years. Again, when in India the British Army Surgeon has exactly the same pay and other allowances as the Indian Surgeon who is permanently quartered there. After twelve years' service the British Surgeon becomes at once Surgeon-Major, without examination, while the Indian Surgeon has to undergo that ordeal, often at considerable inconvenience, before his promotion. If the health of the Indian officer break down before he is qualified for a pension, he is placed in a much more unfavourable position as to half-pay or retiring allowances than his brethren of the British Service. By the new Order, not two per cent. of the strength of the Indian Medical Service can rise to the rank of Deputy Surgeon-General—a much smaller proportion than in the British Army Service,—and the rank of Surgeon-General is totally abolished for the Indian Service. We formerly (March 6) drew special attention to the sweeping changes in regard to the high ranks promulgated by the new Order, and indicated the very serious effect they would have upon the prospects of Indian officers, inasmuch as a great increase of pension accrues to those who have attained these higher ranks. No Indian officer can in future gain the larger extra pension (£350) of Surgeon-General, and much fewer than under the regulations hitherto in force can look forward to gaining even the smaller extra pension (£250) of Deputy Surgeon-General. And even as regards the pensions on retirement of Surgeons-Major, the Indian officers are placed at a very serious disadvantage as compared with the British Army officers.

It is further pointed out in the document before us that there is far less guarantee than in the case of the (Home) Army or Navy Medical Service that even the present position of Indian medical officers, however objectionable that may be, both absolutely and relatively, will not suffer further deterioration at the hands of an autocratic Government, which has shown itself so ready to set aside at a moment's notice the recognised regulations under which its officers entered its service. The document concludes by referring to the fact that the Indian Government has gradually encroached upon the privileges of the Indian medical officers as guaranteed by Parliament when India was transferred from the Company to the Crown. This point our readers will find explained in the letter from "Indicus Medicus" in another column.

THE WEEK.

TOPICS OF THE DAY.

The *Times* correspondent at Portsmouth reports that since the death of Dr. Domville, the Inspector-General of Haslar Hospital, from typhoid fever, the attention of the Admiralty has been specially directed to the sanitary state, or the want of it, in the whole of the Government establishments in Portsmouth. A very searching examination has been instituted by Colonel Percy Smith, R.E., and the drainage system was found so radically defective that Admiral Ryder insisted upon very extensive alterations being made. Admiralty House, the official residence of the Naval Commander-in-Chief, was the first to be taken in hand; after which the Royal Naval College was dealt with, the gunnery students temporarily messing on board the *Duke of Wellington* and the *Excellent*; and all the houses inhabited by the dockyard officers are to undergo a thorough overhaul. In every case the drainage was found to have been brought inside the buildings, so that sewer-gas found ready admittance. By the new arrangements the drains are made to stop outside the walls, the interior pipes flowing into them through open traps. It is also intended to apply a similar remedy to Haslar Hospital and to the Lock wards of the Portsmouth Hospital. These form a distinct portion of the medical charity; but, as Colonel Percy Smith has been empowered by the Admiralty to report upon the sanitary condition of the whole institution, it is possible that the reform will be made throughout.

The Principal of the Laboratory of the Inland Revenue Department has recently issued his annual report for the past year. One of the large items of examinations is that of articles the genuineness of which is disputed before the magistrates, and the utility of the Department as a court of appeal is evidenced by the fact that in several instances the evidence of the public analysts has been set aside, and articles impeached declared to be thoroughly genuine. Attention is particularly directed to the new substitute for butter, "oleomargarine." According to a report of the British Consul-General in New York, recently published in a Blue-book, about six millions of pounds a year of this article are exported from that city alone. It is sent chiefly to Holland, where it is mixed with a certain proportion of milk to give it the proper flavour, colouring ingredients to complete the resemblance to butter are added, and it is afterwards churned and converted into "butterine." It is then packed in butter-tubs and re-shipped to France and England, but chiefly to England, where also, it is shrewdly suspected, a large proportion of the French importation ultimately finds its way, *viâ* Normandy. This "oleomargarine" is made from raw fat crushed in a solution of common salt and sulphate of soda; it is afterwards slowly heated to 103°, and at the same time mixed with a quantity of the gastric juice of pigs, the fat being drawn off. The stearine is then separated, milk or cream added, and the whole carefully cooled. An eminent American analyst states that more than ninety millions of pounds of oleomargarine butter and cheese were manufactured in the United States in 1878, and that he found living organisms and eggs resembling those of the tape-worm in it. As this country is said to be the largest recipient of this unsavoury compound, it is to be desired that our analysts should endeavour to ascertain for a certainty the truth of this assertion.

At the Hammersmith Police-court, Mr. Paget, the magistrate, endeavoured last week to inculcate by example the importance of vaccination. A man was summoned to appear before him with respect to four of his children who had not been vaccinated. The prosecuting officer of the Kensington Vestry stated that the defendant removed his family to different addresses to evade the law; he had, however, traced him and served the notices. The defendant did not appear, but his wife represented him, carrying the youngest child in her arms. Mr. Paget told her she was doing great harm to her children by leaving them exposed to the consequences of one of the most terrible diseases in the world. The wife replied that she had seen two healthy children break out into sores after vaccination, and they subsequently died, since which time she had had a great fear of it. Mr. Paget said if she would consult any experienced medical man he would tell her that thousands of lives had been saved by vaccination. He had no doubt that she wished her children to remain healthy, but she was exposing them, perhaps to what was far worse than death—blindness, and a miserable disease. He (Mr. Paget) had been vaccinated four times in the course of his life. The wife having promised to have

(a) The office of the "Indian Medical Defence Fund" is at 8, Northumberland-street, W.C.; Charles Wahab, Esq., is the secretary.

the children vaccinated, the summonses were adjourned to give her the opportunity of doing so.

Mr. Payne, the City Coroner, held an inquest on Saturday last on the body of a Spanish Jewess, aged about seventy-nine, who lived at Catherine-Wheel-alley, City. Mr. Dyte deposed that he was called to see the deceased on the previous Wednesday; she was in a dying state, and lay on the floor, with her head under the fire-grate. A woman named Levy, her companion, was almost in a similar condition, and she was removed to the infirmary. The deceased was in a horribly dirty condition. He had been in practice in the worst part of Spitalfields for twenty years, but had never seen such a case. A heap of rubbish in the room consisted of rotten garbage, odd pieces of fish and meat, bones in a putrid state, decomposed vegetable refuse, and mouldy pieces of bread; there was also a quantity of dirty rags. All these had been collected by the woman Levy. The body of the deceased was in a loathsome condition; her clothes were rotten, and her skin looked as if water had not touched it for months. Death resulted from want and neglect; there was no food in the stomach; and, in his opinion, it was a case of voluntary starvation, for the deceased was in possession of both money and food at the time of her death. A juror remarked that he had heard of the boasted perfection of the sanitary arrangements of the City; but this was disgraceful. In agreeing to a verdict of "Death from serous apoplexy, accelerated by privation through her own neglect," the jury expressed their strong opinion that the sanitary officials had neglected their duty in allowing the room to remain in such a filthy state, and in permitting the removal of the filth found from one house to another.

At a general meeting of the Society for Preventing Street Accidents, held last week, Lord Templetown brought formally before the committee the subject of providing refuges at the more important street-crossings, where they were most needed, and moved that the Board of Works and the different vestries should be memorialised on the subject. The secretary was also instructed to obtain from the different metropolitan hospitals a return of the number of cases of accidents treated in each, and forward the same to all the newspapers. We are of opinion that all that is being done by this Society should, as a matter of right, be done by the Metropolitan Police Commissioners, or some other official body, but as this has not been attempted, we are indebted to Lord Templetown and others for endeavouring to lessen the waste of life in our metropolis from thoroughly preventable causes. It was also stated at the meeting that several New York citizens, who had witnessed the good work of the Association in London, were anxious to establish a kindred society in their own capital. We may therefore indulge in the negative comfort of learning that, in this respect, London is no worse off than some other large towns.

The German Chancellor has caused the announcement to be made that his Royal Highness Duke Theodore of Bavaria, who recently took the degree of Doctor of Medicine at a German university, has received the certificate enabling him to practise as a surgeon without being required to undergo the additional, or State, examination to which intending practitioners are ordinarily liable under the German law.

THE MORTALITY FOR THE LAST QUARTER OF THE YEAR 1879.

The report of the Registrar-General on the health of England for the last quarter of the year 1879 conveys the unexpected information that, compared with the mortality that prevailed during the last quarter of the year 1878, the mortality recorded during the still colder three months ending December last showed a decline of 5·3 per cent.; equal to 1·4 per cent. among infants under one year of age, to 4 per cent. among children and adults aged between one and sixty years, and to 8·2 per cent. among persons aged upwards of sixty years. During the period under notice, notwithstanding the exceptional severity of the weather, the death-rate in England and Wales was 0·5 per 1000 below the average rate in the corresponding periods of the ten years 1869-78, and was equal to an annual rate of 21·4 per 1000 of the estimated population in the middle of the year. In the principal urban population of England and Wales the death-rate was equal to 23·8, whereas in the rural population it did not exceed 18 per 1000. In the last quarter of 1878 the excess of mortality due to cold was relatively larger in the rural than in urban populations; but during the last quarter of 1879 this experience is reversed, and the town have suffered more than the country districts. Taken together, 17,762, or 13·1 per cent. of the total deaths registered in England and Wales during the quarter, resulted from the seven principal zymotic diseases, and were equal to an annual rate of 2·80 per 1000, which was under the average of the corresponding quarter of the previous nine years. The deaths from small-pox, which had been 243, 164, and 79 in the three preceding quarters, further declined to 61 in the three months ending December last, which is the smallest quarterly number of deaths from that disease on record. Of these 61 fatal cases, 38 occurred in the metropolis, 20 in Bath, and but 3 in the remaining portions of England and Wales. The report, in alluding to the large proportion of uncertified deaths occurring in Sheffield, Hull, and Sunderland, notices the fact that the proportion of uncertified deaths in Nottingham and Bristol has shown a marked decline since the medical officers of health for those towns called local attention to the subject, and it adds a belief that if similar action were taken by the medical officers of health of the first-named towns an equally satisfactory result would ensue.

THE MEDICAL ARRANGEMENTS AT THE BRIGHTON REVIEW.

At the Volunteer Review held on Easter Monday at Brighton, two field hospitals were established and thoroughly equipped by the authorities with a medical staff, a detachment of the Army Hospital Corps, and every appliance for the treatment of the sick and wounded. The first of these, the Warren Farm Hospital, was under the personal charge of Surgeon Seymour Burrows, of the 1st Sussex Artillery, assisted by Surgeons Dixon and Turner, of the 1st Sussex Rifles. The other, the Race Stand Hospital, was superintended by Surgeon Egan, of the 2nd South Middlesex Rifle Volunteers. Both the attacking and defending force were accompanied by two ambulances, two general service waggons, and two water-carts, in charge of the Army Hospital and Army Service Corps. The casualties during the day were few, and of an ordinary description, principally fainting and sprains. The only serious occurrence reported befel one of the staff officers, who was thrown from his horse, sustaining a bad dislocation of the shoulder, but who, after the necessary attention at the Warren Farm Hospital, was able to be removed to his quarters.

THE HEALTH OF THE WHITECHAPEL DISTRICT.

The quarterly report on the sanitary condition of the Whitechapel district for the period ended September 27, 1879, by Mr. John Liddle, the Medical Officer of Health, gives the total births registered as 658, and the deaths 532. In the corresponding quarter of the previous year the total births were 644, and the deaths 566. The deaths from epidemic diseases in the entire district were 114; in the corresponding quarter of 1878 they numbered 106. The present report shows an increased mortality from scarlet

fever, but a decrease in the fatality of diarrhœa; the deaths from the latter disease having fallen from 71 in 1878, to 46 in the September quarter of 1879. The mortality of children under one year of age was 120, equal to 22·5 per cent. of the total mortality; under five years of age the total deaths were 237, or 44·5 per cent. Mr. Liddle remarks that the average rate of mortality in a given district—the rate being calculated for the entire area—does not always indicate the healthiness or unhealthiness of that particular district; and in making a comparison between one district and another as regards their relative healthiness, it is necessary to inquire into the social condition of the people, their habits, ages, occupations, etc. The greater the number of illegitimate children born and living in a locality will, to some extent, increase the death-rate, probably owing to the want of care bestowed on these unfortunate beings. Although within the past few years several houses have been taken down in the Whitechapel district, while very few new ones have been erected in their stead, Mr. Liddle is of opinion that its population has not diminished since the last census. A large number of foreigners of the poorer classes crowd into the tenemented houses at night, and, if the census were taken at night, and by personal inspection of the rooms in some of the lowest localities, the population would be found to be greater than is given in the published returns.

DR. W. FARR, C.B.

We are glad to observe that it has at last been officially announced that her Majesty has been graciously pleased to appoint Dr. William Farr, F.R.S., to be a Companion of the Most Honourable Order of the Bath.

THE REPRESENTATION OF THE CITY OF DUBLIN.

Dr. Robert D. Lyons, Fellow of the King and Queen's College of Physicians, has come forward as a candidate at the forthcoming election for the city of Dublin. He stands "as a Catholic, a Liberal, and an Irishman, independent, unfettered, and unpledged." To "Home Rule" he gives a modified assent, holding that "no valid reason has ever been advanced why local business should not be transacted by competent local tribunals fully authorised to determine it." But he says, "To Imperial measures in the Imperial Parliament Irishmen have rendered the most splendid services, and the destinies of the empire are largely swayed at this very hour by Irishmen, both at home and abroad. This great heritage is common to us and the sister kingdoms, and is one in which it is my conviction Irishmen are destined to play a still more leading part, when full scope is given by education to the ever-fruitful growth of Irish genius." His address concludes with the following paragraph:—"To the members of my own profession amongst the electors of Dublin I venture to address myself specially. With me they have long felt the want of adequate representation in Parliament on the many questions on which not alone are their most vital interests affected, but on which it is of advantage to the State that medical science and skilled knowledge should be brought to bear. The pay, status, and conditions of service and retirement of medical officers in all the great departments of the State require to be adjusted. Sanitary science and State medicine are growing daily in public importance, and can only be adequately interpreted to Parliament by experienced physicians. Legislation on medical subjects is imminent, and largely concerns the interests of our great Irish schools of medicine and surgery, and our Irish medical corporations. To direct such legislation into its proper channels, and to safeguard the highest interests of our profession, which has filled so important a space in the history of this city for more than a century, shall be my aim. On these public and professional grounds I appeal to my friends and colleagues in medicine and surgery to record their votes in my favour." The nomination for the city of Dublin took place last Wednesday, March 31, and the polling is fixed for next Monday, the 5th inst.

MUNIFICENT BEQUEST TO THE UNIVERSITY OF EDINBURGH.

The late Dr. Andrew Vans Dunlop, of Edinburgh, has left to the University of Edinburgh the residue of his estate, amounting, it is stated, to about £50,000. Of this sum, £30,000 will, it is said, be paid at once to the University, the balance coming to it ultimately: £3000 is to go to the general fund of the University, and the rest of the bequest is to be employed to found sixteen scholarships, to be called "Vans Dunlop Scholarships," of the annual value of £100 each, and tenable for three years. The will provides that the first six scholarships shall be for students of medicine, while the rest shall be divided equally amongst students in the classes of chemistry, English literature, classics, political economy, logic and moral philosophy, natural philosophy, mathematics, natural history, and engineering.

THE TOTTENHAM SANITARY ASSOCIATION.

The Tottenham Sanitary Association, which, it will be remembered, is a local body established to watch over the sanitary condition of the parish, has recently issued its sixth annual report for the year 1879. In its estimate of the population of the district, the Association does not agree with the Registrar-General, but, calculating by the number of inhabited houses, it arrives at a result of 37,399 inhabitants, which is no less than 1509 in excess of the number arrived at in computing by the plan adopted by the Registrar-General. This discrepancy, which next year's census will set aside, necessarily affects all calculations, so that whilst the Registrar-General's returns show an annual death-rate for the district of 17·6 per 1000, the Association's calculation makes the annual rate only 16·9 per 1000. An indication of the rapid increase in the population of Tottenham during 1879 is afforded by the increase in the number of births, which have risen from 1162 in 1878 to 1368 in 1879, an increase of about 18 per cent. In twelve of the other suburbs of London the increase in the birth-rate is less than 6 per cent. Meanwhile, the increase may be expected to be still greater during the current year, as the extension of accommodation by building operations, especially in the southern portion of the parish, has of late been, and still is, progressing with extraordinary rapidity.

QUEEN'S UNIVERSITY IN IRELAND.

A meeting of the Senate of the University was held at Dublin Castle on Tuesday, March 30, his Grace the Duke of Leinster, Chancellor, in the chair. The following were appointed Examiners in the Faculty of Medicine:—*Examiner in Medicine:* Denis C. O'Connor, M.D., Professor of Medicine, Queen's College, Cork. *Examiner in Surgery:* William Thomson, M.D., Surgeon to the Richmond Hospital. *Examiner in Midwifery:* William K. McMordie, M.D., Belfast. *Examiner in Materia Medica:* George F. Duffey, M.D., Physician to Mercer's Hospital, Dublin. *Examiner in Medical Jurisprudence:* Matthias O'Keeffe, M.D., Professor of Materia Medica, Queen's College, Cork. At the same meeting, Dr. John T. Banks, Physician to the Queen in Ireland, was appointed representative of the University on the General Medical Council.

MORTALITY IN MARYLEBONE PARISH DURING THE MONTH OF FEBRUARY LAST.

Dr. John Whitmore, the Medical Officer of Health for the Parish of St. Marylebone, reports that during the month of February 455 births and 390 deaths were registered in his district. The mortality represented an annual death-rate of 31·83 per 1000 of the population of the parish; but in the first week of the month the death-rate was a little over 50 per 1000, or considerably more than double the weekly average for the whole year. In that week the number of deaths registered from bronchitis alone amounted to 119; of these 33 were children under the age of five years, and 55 adults above the age of sixty. A glance at the meteorological table, Dr. Whitmore remarks, will at once explain the causes of the excessive mortality of that particular week: the temperature was excessively low, and there was an unusual prevalence of fog—circumstances which, taken together, are calculated to produce diseases of the breathing organs, and hasten their fatal termination. The number of deaths during the month amongst aged persons, from no assignable cause, was 22; of these 17 were over eighty years of age, many of whom, doubtless, died because they did not possess sufficient vital force to resist the life-destroying effects of the severe and unusually inclement weather to which they were exposed. Amongst diseases of the zymotic class—excepting whooping-cough, which destroyed 25 children—the death-rate was very low: 1 death was registered from small-pox, 1 only from measles, and 5 only from scarlet fever. Dr. Whitmore calls attention to the fact that the number of deaths from phthisis during the month was by no means excessive, and was much less than is often recorded during a similar period in warm summer weather.

THE ROYAL SOCIETY.

It is announced that after Easter the Royal Society meetings are to be held at half-past four in the afternoon instead of at half-past eight in the evening.

Verbal Payments.—A correspondent in Dakota Territory writes:—"Your interesting and 'ower true' leader on 'Doctors' Bills' recalls to my memory a rather amusing experience I had during the earlier years of my practice. I was called at midnight to see a gentleman who had just returned from a late dinner, where in hasty eating he had lodged a large fish-bone in his throat. I provided myself with an emetic, œsophagus forceps, and other paraphernalia designed to give him relief, and hurried off to him. I found him pacing up and down with a look of intense distress and anxiety, occasionally running his finger down his throat, and gagging. He told me, in tones of despair, that he thought it was all up with him, but begged me, if the least glimmer of hope remained, to proceed at ouce in my efforts to relieve him. He extravagantly declared that he would give a million dollars to have that fish-bone removed. I assured him that such cases were frequent, and ordinarily not attended with much danger, before proceeding to carry out measures for his relief. His fears underwent some diminution on the strength of this, and he then declared that fifty thousand dollars would no more than repay the skill and art required to extricate the unwelcome intruder. I smiled, and proceeded to introduce the forceps, but after several efforts failed to grasp the bone. His fears again induced him to mention a fabulous sum as the meed of the service that would expel the object of his terrors. I then gave him the emetic; its depressing effects causing his generosity to rise again, barometer-like, to a very high pressure. In a little while the emetic disburdened him of the greater part of his dinner, and with it up came the fish-bone. He gave a sigh and look of relief, and, solemnly looking towards me, said, 'Doctor, I would not have that thing in my throat again for five dollars!' My fee eventually resolved itself into the 'valuable experience' that the occasion afforded me."

MEDICAL EDUCATION AND THE NEW BALTIMORE UNIVERSITY.

The following letter has, by request, been addressed by Dr. Acland, Regius Professor of Medicine in Oxford, to the Trustees of the Johns Hopkins Hospital and Johns Hopkins University, Baltimore. It is so valuable that it well deserves the careful consideration of our readers, especially those interested in education; and it must be remembered that Dr. Acland is President of the Medical Council.

Gentlemen,—I gladly comply with your wish that I should put upon paper the substance of the remarks which I should have ventured to make on Wednesday last at the opening of your University session, had I not been necessarily absent by reason of a sharp, though temporary, indisposition. You had requested me, on that occasion, to state to your meeting the impression which the various documents relating to your University, a visit to its buildings, and a study of the plans and structure of your Hospital on the spot and in your company, had made upon me.

To fully record these impressions would occupy much space; it would moreover be superfluous, inasmuch as my conclusions are, on the whole, in agreement with those which I believe to be your own, and those of far the greater part, if not all, of the able administrators, your colleagues, who with you administer the noble, wise, and benevolent bequests of Mr. Johns Hopkins.

It is right that I should preface my remarks by saying that it is nearly two years since Dr. Billings visited me at Oxford, and explained your scheme. He then left with me the proposed plans of your Hospital, as well as the published documents explaining the views of the trustees. It is in consequence of the great interest which his statements excited in me, on account of their relation to the whole subject of medical education, both in America and in Europe, that my present visit to the United States is largely due. Since I landed in America, I have had the great advantage of much conversation on the broad questions of general and medical education, and of public health administration, with various and valued friends in Boston, New York, Philadelphia, and Washington. I have moreover visited several hospitals, old as well as recent, on this and my previous visit to the United States, in all these places; and lastly, you are aware that I have necessarily heard much on these questions, both at home and abroad, during the last thirty-five years—a period of unexampled progress and change.

With this preface, I venture to offer the following brief observations:—

1st. I understand the object of Mr. Hopkins to have been to found in Baltimore a University, and a Hospital, which is to be closely connected with the Medical School of the University.

2nd. It is impossible to exaggerate the importance to medical education in the future of such an intention and bequest, carried out with your present knowledge and experience.

Situated in an increasing city of 350,000 inhabitants, with extensive grounds (between 300 and 400 acres) splendidly situated, your University and your Hospital will have everything that opportunity and site can give. The moment of the foundation is that of a crisis in medical education. The experience of the past, and the knowledge, the activity, and the appliances of the present, all combine to make your success in some line certain. The direction which that success will take depends on the foundation which you now lay. There are already too many common medical schools. A school completely planned for certain important purposes does not exist. Such a school I understand you intend to found.

3rd. For the complete training of a scientific medical man, three distinct qualities of mind are needed:

(*a*) Those fostered by general literary culture.

(*b*) Those dependent on special scientific attainments.

(*c*) Those which come from close observation of the living sick, followed by, or accompanied with, investigation of the dead.

4th. Each of these bundles of qualities is to be fostered, speaking generally, at a special period of life, by a special course of study, and with special opportunities.

They may, taken roughly, be called the school, the university, and the hospital periods. There is a tendency to

draw a hard line between these. It is easy to show that this is an unnecessary, and even an injurious, course for the best minds. Much time has been occupied in fruitless endeavours to decide whether physics, chemistry, botany, and animal physiology, any or all, should be in all cases confined to the school period, whether examination in all should take place at one time, or whether any or all should be left to the period of medical studies. What appears to be important is, that they should all be studied in a certain order, and that the due amount of acquirement in each should be tested at certain periods and in a certain order by unimpeachable examinations, written. oral, and practical.

5th. It may seem almost strange to remark that the amount of knowledge to be wisely required of medical students in their usual preliminary subjects is as much matter of dispute as the period at which they should be examined for them. This appears generally to depend upon crude notions as to the end to be obtained in the education of medical practitioners. These notions generally arise from want of appreciation of the fact that some kinds of knowledge are requisite for the science of medicine as a whole, which are not requisite for any individual member of the medical profession, in order to enable him to possess the requisite knowledge and skill for the safe exercise of his art. It would take long to illustrate this point fully, but it is highly important. Chemical, physical, biological, pathological, and therapeutical researches. and laboratories of the highest order, and involving much subdivision of labour, are required for the progress of medicine as a science. Active practitioners may, it is true, be advanced chemists, biologists, or histologists, as Prout, John Hunter, and Bowman have been. It is better, therefore, once for all to say here, that in my judgment men of this kind are born with rare qualities which enable them to become what they are, and are not educated to it.

6th. But in the education of the masses of practising physicians and surgeons, the organisers of education, the teachers, and the examiners, should aim at two great objects—

1st. At securing that the examinations demand of them mainly what they should know as practitioners, and

2nd. At teaching them that which they are to be examined in, so that the full powers of the average mind be evoked in a manly way.

Does this statement seem to preclude the chance of securing a higher than an average standard within the profession, or stand in the way of training the abler students by a more thoroughly scientific method?

Certainly not. But it does imply better preliminary education, more expense, and larger time, than can be expected of, or be given by, the average class of youths who mean to follow the ordinary routine of practice, but not to act as the teachers and advancers of medical science.

7th. It is not for me now to discuss how far the trustees of Johns Hopkins University may hereafter seek to train a large number of students according to the standard of attainments of ordinary medical schools. They recognise that of the lower kind of schools there are more than enough, and they have decided on marking out a plan for training at present, only or chiefly, those who are able and willing to devote themselves to the higher studies of medicine and of surgery, by such preparation as may be deemed by the trustees essential to this end.

8th. They propose, I am informed, to require, firstly, that none shall enter on the scientific course till they have passed a good secondary school examination, or a higher matriculation examination, and after the age of sixteen; secondly, that none shall enter on the final or practical course of the Hospital and Medical School till they have taken a degree in the scientific department of the University, after a three years' course of study, or have exhibited attainments corresponding thereto; and thirdly, that whatever number of medical students may be permitted hereafter to have the advantage of clinical instruction in the Hospital, there shall be a number of students holding Hopkins Scholarships and residing in the Hospital, who shall have passed all the physical, chemical, and biological examinations required for this end.

9th. This method, carefully carried out, will insure a body of trained students, forming a "*cadre*" of a medical school, such as cannot be excelled. This provision that no student should be allowed to act in a hospital till he has been engaged for three years in laboratory work in physics, chemistry, and biology, subsequent to a good general literary education, will be a new epoch in the history of medicine.

10th. It would be superfluous for me to comment in detail on the three branches of education—literary, scientific, professional—as you propose to carry them out. Yet I may be allowed space for a few remarks on each of the great heads of your programme.

I. *As to the general or literary education.*

I think the age of sixteen somewhat young for entering on the scientific course if the literary education is then closed; not too young for some minds, nor too young for the exceptionally strong. But few boys have learnt to *think* at this early age. I observe you put logic and psychology in the advanced course. This perhaps meets the objection as to age; for it implies the carrying on in earnest of higher literary pursuits. I should not insist on the study of Greek. It is better if it be taken up. A good man is worse without it than he would have been with it. But accurate study of precise grammatical language must be in some way secured.

I venture to observe that in the study of history, large-minded biographies should be used, or biographical rather than military history. Adequate and noble views of man are needed by a physician, as against mean and selfish and low notions of life. Some religious discipline—that is, some aspiration for a religious life—appears to me as important at least as the possession of any other gift of the mind. Manly recreations, subordinated to the life of work, are needed to call out the manly qualities of energy, resource, and good humour so essential for physician or surgeon. I should encourage rowing or sailing which your youths can have rather than field sports. There is as much skill in the former, as much danger, and more room for the application of science. The companionship of hardy seamen is good for all men. So is that of the best and manliest sportsmen. At any rate I would urge attention to the manly life—as distinguished from that of book-work—but let it be kept in check by the public opinion of the University. I know you to be so keenly alive to the supreme importance of *character* for the well-doing and happiness of medical men, and for the sake of the public through their influence, that I need not dwell on that. I have only to add, as the sum of the whole, that it should be clearly understood by the public that no man has become a Doctor of Medicine of Johns Hopkins University who has not passed through that training which you require of a Bachelor of Arts or of Science, or the equivalent thereto, prior to his professional studies. And this I gather to be the principle which you desire to carry out by such means as you are able to employ.

II. *As to the preliminary scientific training.*

11th. The time of three years which has been allotted by you to the period of entirely scientific study in the University should be amply sufficient for the student of medicine, but is by no means too long. In the present day, the subjects of physics, chemistry, and biology have become so extensive that each demands entire devotion for high excellence therein. As regards biology, in the full sense of the word, it may be certainly said that its essence cannot now be thoroughly understood, or its details mastered, except by anatomists and pathologists who are also physicists and chemists. It is impossible for any, therefore, but men of great vigour of mind and robust power to become, in any accurate sense, complete biologists. Nor indeed is there anyone living who would pretend to know a tithe of what is known of the fauna and flora of our planet, in all their relations. Nevertheless, the attempt is by no means undesirable. A medical student, well taught by serious and capable teachers, who will take pains to work him in the direction most profitable for the pathologist, can now be trained in the essentials of physics, chemistry, and biology in three years. But the teachers in each department require three things—apparatus, money, and self-restraint.

You have provided your professors with the two first; and I have reason to believe they truly and wisely have the third. To illustrate my meaning as to this third, I would say, that if the physicist will treat his subjects of mechanics, heat, light, electricity, including acoustics and optics, only in a sense which he considers perfect, no medical students can attend his complete courses except those who mean to become physicists rather than physicians or surgeons.

12th. The biologist needs opportunity in addition. By opportunity I mean the power of obtaining types of invertebrate and vertebrate zoology, in abundance and readily. This opportunity by your maritime position you can give—and by the zeal, large-mindedness, and general grasp of the whole

range of this subject possessed by the biological staff, this opportunity has been already used with great effect. None but those who have worked freely in the world of marine zoology and anatomy have any idea of the difference between a superior fresh supply of marine animals and mere museum work for students. I need not dilate on the healthiness and delight, intellectual and physical, of summer seaside natural history studies, nor on the magnificent territorial range of your coasts, easily visited. But I may quote a remark I made to Agassiz twenty years ago at Boston, that the results to be obtained in your seas, which extend over so many degrees of latitude, will of necessity be greater than any before known, whenever the number of capable and trained students has become equal to the task before them. The day has dawned. As to the extent of physiological, as distinguished from morphological studies, I make but one remark—that living pathology is an integral element therein.

13th. It may seem to some that I forget that these scientific studies are a preparation for medicine. This is not the case. The anatomy of man comes within the range of the science studies which you direct, so far as is required for comparison with the lower animals, for the intelligent understanding of man's place in the creation, and for the ground-work of hygiene and medical anatomy properly so-called. These last are properly to be studied after the three years of the scientific course, in which, however, I observe that general histology is included.

14th. There are only two other points which it seems right to notice. As the students increase in number, and the professors are for this reason distracted from original work for themselves, the subjects of the chairs will have to be subdivided. Physics, chemistry, and physiology are each too large for one professor, in so advanced a school as yours, unless, as is already the case in the Johns Hopkins University, several assistants for sub-departments are placed under one head. This is a question of administrative organisation, and beyond my province.

FROM ABROAD.

Prizes of the Académie des Sciences.

At its anniversary meeting, held on March 1, the Academy distributed the prizes for the year 1879; and the *Compte-Rendu* of that meeting, besides the address of M. Daubrée, the President, and the list of the prizes adjudged, as well as of those for which no candidates presented themselves, or no awards were made, contains the reports of the various committees to whose consideration the claims of the several competitors were referred. As these reports state the grounds upon which the decisions are based, and are usually the work of very eminent members of the respective committees acting as reporters, they are often documents of the highest interest; and we cannot but consider the plan thus adopted by all the scientific and medical societies on the Continent as far superior to our own, in which the names of the referees and the reasons of their decisions are kept secret. This may be one reason why the prize-system has attained such limited success in this country, competitors being unwilling to submit the results of their investigations to anonymous and irresponsible judges. The prizes at the disposal of the French Académie des Sciences are numerous and important; but we notice only such of them as are likely to prove of most interest to our readers:—1. In the statistical section of the Montyon Prizes, awards were made to M. Le Bon for his work entitled "Anatomical and Mathematical Researches on the Laws of the Variation in the Volume of the Brain, and on their Relations to the Intellect," and to M. Borius for his work on the Climate of Brest. 2. The Lacaze Prize in Chemistry was adjudged to M. Lecoq de Boisbaudran for his discovery of the metal gallium. 3. The Barbier Prize was not adjudged, but an "encouragement" of 1000 fr. was given to Dr. Manouvriez, of Valenciennes, for his memoir on the Anæmia of Miners. 4. The Thore Prize was given to Prof. Edward Brandt, of St. Petersburg, for his researches on the Nervous System of Insects. 5. For the Montyon Prizes in Medicine and Surgery three candidates received prizes in alphabetical order, viz.—MM. Dujardin-Beaumetz for their "Experimental Researches on the Toxical Power of Alcohols," M. Tillaux for his "Treatise on Topographical Anatomy," and M. A. Voisin for his "Treatise on the General Paralyses of the Insane." "Honourable mentions" were also accorded to M. Bochefontaine for various memoirs on the contractility of the spleen, the effects of stimulation of the superficial portions of the brain on the functions of organic life, etc.; to M. Lecorché for his treatise on Diabetes, which Prof. Vulpian, the reporter, declares to be the most complete monograph which has yet appeared upon the subject; and to M. Simonin for his work entitled "On the Employment of Sulphuric Ether and Chloroform at the Surgical Clinic of Nancy." In addition to these, the Committee makes the following "citations" in alphabetical order:—M. Azam, for his "Primary Union and the Dressing of Wounds"; M. Delaunay, for a memoir on Comparative Biology based on Organic Evolution; M. Grasset, for his lectures on Diseases of the Nervous System; M. Grêhaut, for a memoir on the Absorption of Oxide of Carbon by the Living Economy; M. Poncet, for his researches on the Pathological Anatomy of the Eye; M. Porak, for a memoir on the Absorption of Medicinal Substances by the Placenta, and their Elimination by the Urine of the New-born Infant; and M. Riembault, for a memoir on Apparatus for the Transport of the Wounded, and especially after accidents in mines. 6. The interest accruing from the unawarded Bréant Prize was given to M. Toussaint for his memoir on the Cholera of Poultry, proving experimentally this to arise from the presence of microscopic organisms—researches that have subsequently been confirmed by Prof. Pasteur. 7. Two Godard Prizes were given this year, one being adjudged to M. Alphonse Guérin for his clinical lectures on the Diseases of the Female Internal Genital Organs, and the other to M. Double, of Tours, for his essay on Gonorrhœal Epididymitis. 8. The Chaussier Prize in Legal Medicine has been adjudged to a dead man, the late Prof. Tardieu, who had already obtained it in 1875. The two best essays which have since then appeared are, in the opinion of the Committee, by Prof. Tardieu, one entitled a Medico-Legal Study on Wounds; the other, a Medico-Legal Study on Diseases produced accidentally or involuntarily, by imprudence, negligence, or contagious transmission. The amount of the prize will be handed over to the widow of the deceased professor. 9. The Montyon Prize in Experimental Physiology is awarded, with a strong eulogium by the reporter, Prof. Marey, to M. François Franck for his essay on the Dilator Nerves of the Pupil. 10. The Lacaze Prize in Physiology is given to Dr. Davaine, in recognition of the importance of the numerous works which he has published on Helminthology. 11. The Montyon Prize in the "Arts Insalubrés" was accorded to MM. Boutmy and Faucher for a new and less dangerous method of making nitro-glycerine; an "encouragement" of 1500 francs being allotted also to Dr. Haro for his "Economic Mode of Balneation put into force in the 69th Regiment of Infantry." Each soldier standing upright in a footbath is exposed to a minutely subdivided douche of hot water, and having well scrubbed himself with black soap and a brush, is completely cleansed by a second aspersion. A company of from eighty to one hundred men were subjected to this daily at a cost of about a shilling for the lot. 12. Besides the regular prizes accorded by the Academy, a committee, consisting of MM. Dumas, Bertrand, Chasles, Decaisne, Wurtz, with E. Becquerel, reporter, decreed a special prize of 3000 francs to our countryman, Mr. Crookes, in acknowledgment of the value of his numerous experimental investigations. We suppose that it has seldom fallen to the lot of a *savant* to receive a more gratifying testimony to his scientific services than this.

Sponging with Cool Water in Measles.—Of the use of this, Dr. Coblcigh, in the *Atlanta Med. and Surg. Journal*, says—"If physicians who are afraid of cold in measles will only try it once they will lose all fear of the method; will be happily disappointed at the prompt recovery of the patients; will find their sufferings not only mitigated, but actually shortened as well, though I do not claim abortive powers for the antipyretic plan; and will meet fewer troublesome complications and almost no pathological after-conditions." From experience we can endorse this excellent advice.—*Boston Med. Journal*, February 12.

NOTICES OF BOOKS, ETC.

The Truth about Vaccination. An Examination and Refutation of the Assertions of the Anti-Vaccinators. By Ernest Hart, Chairman of the Parliamentary Bills Committee of the British Medical Association, and Chairman of the Council of the National Health Society. London: Smith, Elder, and Co. 1880. Pp. 87.

This brief pamphlet very well fulfils an excellent intention—that of "placing before the public, in a handy and readily accessible form, the materials for an answer to the numerous objections of the anti-vaccinators." The first chapter, which is introductory, gives first a description of small-pox in its natural state, uncontrolled by vaccination, amongst remote communities in civilised Europe and in England; and of the after-effects of non-fatal attacks of small-pox; and this part, brief as it is, may be of much service, since very few people have, in these days, any real idea of what a horrible disease unmodified small-pox is. The chapter then speaks of the introduction of inoculation and vaccination, states what vaccination is, and describes its power in influencing and in modifying small-pox. In four succeeding chapters such of the allegations against vaccination as appear to merit any serious consideration are separately dealt with, and refuted by medical and statistical evidence. The sixth and last chapter treats of the desirability and value of revaccination. A short summary of the conclusions arrived at is then given, and several instructive and useful appendices and tabular statements are added. The work consists mainly of a public lecture delivered by the author in January last, at the request of the National Health Society; and considerable additions have been made to the facts then brought forward. As a clear and concise statement of the value of vaccination, and of the facts that can be brought forward to disprove completely the assertions of anti-vaccination agitators, Mr. Hart's pamphlet cannot but prove very useful. He has rendered good service in supplying a want frequently and much felt.

Ambulance Lectures; or, What to do in Cases of Accident or Sudden Illness. By Lionel A. Weatherly, M.D., Surgeon to the 1st Gloucester Artillery Volunteer Corps; Lecturer to the Ambulance Department, Order of St. John of Jerusalem in England. London: Griffith and Farran, St. Paul's-churchyard. Bristol: J. W. Arrowsmith. Pp. 65.

Dr. Weatherly's object in writing this little book is to furnish plain and simple directions by which policemen, railway officials, other men engaged on large works, and any person of common sense and understanding, may be enabled to render efficient help in cases of accident or sudden illness till professional aid can be obtained. The first two lectures give a brief but clear general outline of the structure and functions of the human body. Lectures III., IV., and V. describe the means of arresting arterial, venous, and capillary bleeding, the immediate treatment of wounds, fractures, foreign bodies in the eye or ear, burns, bites from rabid animals, frost-bites, sprains, blood-spitting, insensibility, poisoning, drowning, suffocation by gases, sunstroke, and choking. And the sixth lecture gives very good instructions on bandaging, and on the removal of injured or sick persons by bearers, stretchers, country carts, or by train. Dr. Weatherly has very wisely been careful to avoid trying to teach too much—feeling, as he says, sure that if the St. John's Ambulance Association is to continue doing good, "all its lecturers must guard against attempting to make the public what they often want to be made—medical men in embryo." The little work is well illustrated, and well calculated to serve its purpose. We have no hesitation in strongly recommending it.

Compulsory Examinations for Colour-Blindness.—The Secretary of the Treasury has issued an order to the local steamboat inspectors, directing them not to give new licences to pilots, or renew old ones, without a preliminary examination for colour-blindness. The examinations are to be made by the United States Marine Hospital Service, and are free of charge.—*New York Medical Record*, March 6.

GENERAL CORRESPONDENCE.

THE INDIAN MEDICAL SERVICE.

[To the Editor of the Medical Times and Gazette.]

Sir,—Recent changes in the Indian Medical Department must tend seriously to detract from its long sustained popularity among the public services. In the days of the East India Company, when all Indian medical appointments were given by the Directors, it was as difficult to secure a nomination as assistant-surgeon as it was to obtain a writership in the Civil Service. Lord Dalhousie has placed this fact on record in a minute relative to the Indian Medical Service, which he wrote when Governor-General; and up to the present time it has been the most attractive of the services to young surgeons, and the number of candidates for appointments at the competitive examinations has been greatly in excess of the number of vacancies, even when these examinations were severer than for either the Army or Navy. Without doubt this is not likely to be the case much longer. One advantage of the Service hitherto has been that patronage has on the whole been fairly administered in promotion to the administrative grades; but in the recent appointment of Dr. Payne to be Surgeon-General to the Government of Bengal a clear indication has been given that patronage will henceforth be administered upon different principles. Hitherto it has been the practice that an officer who had once refused promotion could not obtain it afterwards; but, though Dr. Payne refused promotion some years ago, for private reasons, he has been made Surgeon-General in spite of the representations of the head of the Medical Department and the protests and memorials of the senior Surgeons-Major. It is further said that a similar promotion of a medical officer who also previously, for private reasons, refused promotion is highly probable. Such irregular and unjust appointments are the more keenly felt at the time that the number of administrative medical officers has been reduced, as they were by a General Order of the Government of India issued last January. This Order further places the Medical Service in subordination to the Army Medical Department, and does away with the appointment of Surgeon-General in the local service.

Now, as it seems to me, this is a direct violation of Section 56 of Act 21 and 22 Vic., cap. 106, which enacts, "That the military and naval forces of the East India Company should be deemed to be the military and naval forces of her Majesty, and should be under the same obligations to serve her Majesty as they would have been under to serve the said Company, within the same territorial limits only, for the same terms only, and be entitled to the like pay, pensions, allowances, and privileges, and *like advantages as regards promotion and otherwise*, as if they had continued in the service of the said Company." The terms of this clause (known in India as the "Henley Clause," because introduced on a motion by the late Member of Parliament of that name) are so clear that one wonders how the Government could ignore them; and it would almost seem as if any medical officer of the East India Company whose services were transferred to the Queen could, under this clause, sustain an action for damages against the Secretary of State for India for breach of contract.

It is further to be noted that Act 23 and 24 Vic., c. 100, provides "that the advantages as to pay, pensions, allowances, privileges, promotions, and otherwise secured to the military forces of the East Indian Company by the Act of the 21st and 22nd year of the Queen, c. 106, secs. 38, 56, and 58 respectively, shall be *maintained in any plan for the reorganisation of the Indian Army*, anything in this Act contained notwithstanding." At the time that the Acts referred to received the Royal assent there were thirty-four medical officers of the superior grades. By the last General Order they have been reduced to eleven. Is this justice?

It is hardly credible, but it is a fact all the same, that the last batch of young surgeons who have just left Netley for India, as well as those who have just entered on the course of instruction there, have had no intimation of these very important alterations in their prospects. It seems well, however, that not only they, but all medical students who are thinking of an Indian career, should be warned against entering the Service until it is determined whether the

reeent Order is to be earried out. I am glad to find that an Indian Medical Service Defenee Fund has been established in London for the purpose of drawing attention to this matter. The Seeretary is Mr. C. Wahab, 8, Northumberland-street, W.C. I am, &e., Medicus Indicus.

[To the Editor of the Medical Times and Gazette.]

Sir,—A reeent Order of the Goverument of India deprives the Bengal Medieal Service of seven administrative appointments, including that of Surgeon-General, aud our Serviee has been plaeed under the Surgeon-General of the Army Medical Department in Bengal.

In an issue of the *Lancet* for November last allusion was made to impending administrative reduetions in our Department; adding that, of eourse, the Government should see that such eompensation would be given to the members of the Service, whose prospeets for promotion to Deputy Surgeon-General might be thus injured, as would reeompense them for the same; or to this effeet. The Government of India, however, in the Order referred to, have not offered any eompensation to the offieers so injured—*i.e.*, the offieers below those now holding the substantive rauk of Deputy Surgeon-General. This is very unjust, as the prospeets of the junior Surgeons-Major of the Bengal Medieal Department will, for the future, be less than half as good as they were previous to the issue of the Order in question, and the result will be that not only a large number of sueh men will be deprived of the promotion which they were led to expeet on their entry into the Service, and to which they are entitled under the "Henley Clause," but their pensions will also undergo a eorresponding deerease owing to the eauses mentioned depriving them of the extra pensions £250 and £350 a year attached to the administrative grades. All those who entered our Serviee prior to 1861 are entitled to the benefits of the "Henley Clause." The offieers of our Department who entered before that year will, it is expeeted, almost all petition the Seeretary of State for India, and if necessary Parliament, on the points eomplained of above; but we look to journals representing the profession to advanee our just claims, and press them on the Government at home, as was done so suecessfully in respect of the claims of the sister department. You might well warn would-be eandidates, even for the Army Medieal Department, to beware of a Government whieh has so unjustly dealt with so old and sueeessful a department as that of our Serviee, merely because they imagined that the new Warrant for the Army Medieal Department would bring so many reeruits as to make it a matter of indiffereuee how the members of the same profession belonging to another department were treated.

Sueh unfair and dishonest treatment of old, faithful, and deserving servants of the State will surely meet with a fitting punishment, aud the profession at home can scareely view sueh treatment of a distinguished Serviee with equanimity. I am, &c., I. M. D.

India, January, 1880.

THE UNIVERSITY OF ST. ANDREWS: THE UNITED COLLEGE IN DIFFICULTIES.

[To the Editor of the Medical Times and Gazette.]

Sir,—In your issue of Mareh 27 you published under the above heading a statement to the effeet that, owing to bad harvests and depreeiation, eto., in College lands, the revenues of the United College and of the United College professors are being seriously eurtailed. As the situation is eritieal, it may interest your readers to learn that an "Assoeiation for the Better Endowment and Extension of the University of St. Andrews" has been formed, and that those who are disposed to befriend the Arts and Medical Chairs of the College will have an opportunity of doing so by communicating with one or other of the secretaries of this Assoeiation, viz., Professor Birrell, D.D., Professor Knight, LL.D., and Professor Pettigrew, M.D., F.R.S. I am, &c.,

A St. Andrews Medical Graduate.

Gresham Lectures. — Dr. E. Symes Thompson, Gresham Professor of Physic, will give four leetures on Digestion and Indigestion, in Gresham College, on the evenings of April 6, 7, 8, and 9. The lectures are free to the public, and eommence eaeh evening at six o'eloek.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, March 9.

John E. Erichsen, F.R.C.S., F.R.S., President, in the Chair.

Nephrectomy by Abdominal Section.

Mr. A. E. Barker contributed a paper on the above subject. The author first sketched briefly the reasons which induced Professor Simon, of Heidelberg, to plan and carry out, in 1869, the first case of nephrectomy designedly performed on the human subjeet. He showed, in passing, that Simon had been preceded by two American surgeons in the mere matter of removing the kidney; and pointed out the importance of Simon's experiments on animals, and his main conclusions therefrom—1. That this operation is as well borne in the first instance by the system as others now fully recognised, such as excision of the uterus or ovary; 2. That the sudden removal of one kidney does not so far affect the urinary functions as at all to influence the question of the operation; 3. That the health of the animal may be quite as good after as before, and without any uræmic troubles, hypertrophy of the heart, or other evils. The question as to whether these conclusions hold good for man is then shown to have been settled in many respects by the effect of the operation in Simon's first case and in many since recorded. Of these the author has collected twenty-eight from home and foreign sourees, in which, from various causes, a kidney has been removed. These he tabulates under the headings, "Operator's name," "Sex and age," "Diagnosis or object of operation," "Duration of complaint," "Date of operation," "Situation of incision," "Form of dressing," "Treatment of pedicle," "Symptoms after operation," "Result, immediate and eventual," "Hæmorrhage after or at operation," "Condition of organ removed," "Remarks on points of interest about the various cases." In every case the original reference (consulted in all but three instances) is given for convenience of future inquirers. From this list two cases are first quoted, which seem to prove more conclusively than any experiments on animals that neither the incision down to the kidney in the loin, nor the ligature of its pedicle, and its removal, need cause necessarily any great disturbance in the system. In neither of these peculiarly uncomplicated cases did it do so. The organ in both had been wounded by a stab with a knife, and prolapsed, and was removed easily, and without any immediate or remote ill effect. It was the study of these and a number of those others tabulated which led the author to operate in the present case. He found that out of the 28 attempted nephrectomies, 6 were done on a wrong diagnosis, in 2 for neoplasms the operation was left uncompleted owing to difficulties experienced in the isolation of the organ. Of the remaining 20, undertaken with the distinct object of removing the kidney, and completed, the objects were the following:—2 for fistula of the ureter, both successful; 2 for acute pain in the kidney (cause unknown), 1 death, 1 recovery; 2 for calculous pyelitis, both fatal; 3 for injury of the organ, 2 complete recoveries, 1 fatal; 6 for acutely painful movable kidney, 4 complete recoveries, 2 deaths; 4 for neoplasms (1 obscure, however), 1 death, 3 recoveries; finally 1 for pyonephrosis, perfectly successful. If the whole 28 are taken together there are 14 recoveries and 14 deaths. But if we exclude the 6 for wrong diagnosis there are still 13 successful and 9 fatal; 2 of the latter, however, were desperate and left uncompleted. The causes of death were—peritonitis, 4, abdominal section in all; pyæmia, 1; in 1 cause not given (patient died sixty-five hours after); in 1 the cause is stated to have been unexplained by the autopsy, "the patient died within a week"; 2 died of shock ten hours after operation; 2 other desperate cases. In all the successful cases recovery was complete; possible recurrence in 2 excepted (neoplasms). Of the 13 recoveries, 9 were lumbar sections, 4 ventral; of the 9 fatal, 5 were lumbar, 4 ventral. The author points out that much more may be learned from a study of each individual case as to the merits of two rival incisions, than a comparison of so few data as to their relative mortality. On the whole a careful examination of all the records convinced him that nephrectomy is not accompanied by any peculiar shock or risks apart from those

attending most grave operations, and that it is well borne in many cases: that, as an operation, it has a most useful future before it, when we have learned to select proper cases, and have better studied the operation itself. As to the mode of procedure, he would from experiment on the dead body, and careful comparison of those operations already recorded, feel inclined for the present to adopt the following conclusions:—The lumbar operation appears best suited for removal of healthy or comparative healthy kidneys; also where there has been much perinephritic inflammation, old or recent; also for pyo- and hydro-nephrosis, and perhaps for the smaller new growths of the organ especially fixed. The ventral incision appears, on the other hand, best suited for taking away movable kidneys, whether healthy or affected with neoplasms, especially if the latter be large; also for the ordinary cysts of the organ not fixed by inflammation. The difficulty in the case of the neo plasmata of removing the lymphatic glands in and about the pedicle of the kidney (which are known to be an early seat of recurrence) by the lumbar incision would influence him much in favour of abdominal section, by which the root can be better reached. The present case was as follows:—An unmarried female, aged twenty-one, had had lumbar pain for eight months before admission into University College Hospital. Three months before admission a medical man diagnosed a movable kidney. She suffered much from this time onwards from intense pain with frequent nausea and even vomiting and hæmaturia, preventing all work for considerable periods. All this was aggravated from the time of admission. Diagnosis, movable kidney and possible new growth in it; later, on after observation, movable kidney affected with encephaloid. The hæmaturia was almost constant and often profuse during her fifty days' stay in hospital; the attacks of pain were very severe and she was much weakened. Operation December 23, 1879: Like ovariotomy in almost every respect; strictly antiseptic; very little difficulty experienced in shelling out the enlarged organ from behind the external layer of the ascending meso-colon, though this had to be done with the utmost care, as the tumour was very soft in spots; ureter tied separately, pedicle in two portions by transfixion with twisted silk. The operation was almost bloodless; patient bore it very well and showed little shock. Twenty-four hours later she was as strong as before the operation; eight hours later she began to get weak, with hurried breathing, as in attacks before observed; diagnosis, possible thrombosis; death at end of second day; cause discovered to be thrombosis of pulmonary artery. *Autopsy:* Abdominal cavity all that could be desired; repair already far advanced; no trace of sepsis; no evidence of embolus from renal vein, but large thrombus, firm and light-coloured, in right ventricle of heart and pulmonary artery; small secondary deposits in lungs and lumbar lymphatic glands; suspicious specks in liver; other kidney healthy.

The President said that this was the first paper on the subject read here, and it was exhaustive. Many questions arose in connexion with the paper—What would justify such an operation, and how to diagnose the condition? Some diagnostic that the tumour was really renal was required, and then the class of case which would justify interference. Should abdominal section be preferred to the lumbar incision?—though probably this would depend on the nature of the case. Mr. Knowsley Thornton had brought forward a child successfully operated on, and his experience would be of value to the Society.

Dr. Day said that he had in another Society showed a large renal cyst removed by Mr. Knowsley Thornton. The patient was a young girl, who had an abdominal tumour, as to the nature of which they were not decided. The health had been good, and there was no pain or discomfort. The urine was healthy but scanty, and only passed morning and evening. All who had examined the child came to different conclusions. She was examined by the aspirator, and a large quantity of albuminous urine was removed. No bad effects followed; but in six weeks it began to fill up again, and Mr. Knowsley Thornton removed it by abdominal section. The kidney seemed reduced to a large cyst merely. The temperature never rose to more than 101·6°.

Dr. Southey asked if there was any urea in the fluid.

Mr. Knowsley Thornton said that Dr. Day was mistaken, as he had diagnosed the tumour before having recourse to aspiration, which was only intended to make the diagnosis more sure. He thought abdominal section was best, and if he were to operate again he would begin his incision higher up. The child took the anæsthetic badly, but he easily tapped the cyst, and then shelled it out. Two small vessels required to be tied. By turning the tumour forwards he was able to see the vein and feel the artery. He tied them separately about an inch from the aorta. There was no shock, but the patient was very sick. Only about an ounce of urine, containing clots and bright blood, was passed; but in the early morning she began to improve. Curiously, the bloody urine remained free from bacteria, probably from absorption of the carbolic acid used as spray. She was well in a day or two. When we had a simple cyst it was best to operate in front; if there were pus it might be better to open behind.

Mr. Clement Lucas said it was hardly possible to remove a very large structure through the loin, whilst in the operation the greatest dangers seemed bleeding and clotting; the risk of secondary hæmorrhage might be greatly diminished or removed by torsion. He had recently removed, through the loin, a kidney which had long been suppurating, and about six months ago the urine began to flow by the external opening. Pus also passed from time to time, and with that there was great pain. In operating he found he could hardly remove the kidney from the ribs above, and he had to enlarge the opening laterally. He tied the pedicle by strong twine, which broke off short, but no hæmorrhage followed. The man did well at first, but by-and-by bleeding came on and recurred. The wound was opened up and the pedicle again tied, but this did not control the hæmorrhage. At last he introduced a sponge soaked in perchloride of iron, which stopped the bleeding. This has not recurred.

Mr. Spencer Wells had seen Simon's case with him. He said the operation was easy. A reference had been made to one of his own cases. It was that of a lady whom he was examining. In an exploratory operation he came on a sac containing much bloody fluid, but the kidney seemed healthy. So much of this fluid came away that he was forced to go on with the operation. The bleeding was stopped by torsion. The patient lived three days, during which the urine was quite normal. At the end of that time she died, probably from septicæmia, for this was before the days of antiseptics.

Mr. Hamilton Cartwright mentioned an experience in China, where the surgeon of an American vessel was asked to operate on a Chinaman who had a putrid tumour projecting from his liver. This turned out to be a kidney, which was removed, and the man came back quite well.

Dr. Hilton Fagge said that to allude to one part of the paper—viz., the mode of death in Mr. Barker's case—he had a considerable distrust as to the occurrence of pulmonary thrombosis. He hardly thought it possible. A purely white clot was hardly ever seen; there was always some colouring matter at its lower part, either in the vessel or in the heart—showing that it arose from subsidence after death.

Sir Joseph Fayrer insisted that this was really the cause of death in many instances in India after operation. These cases had been most carefully investigated. The same cause could often be assigned for gangrene.

Mr. T. Holmes was surprised that the indications for operation on such a rapidly growing tumour had not been discussed. The operation had been well done, but the woman died sooner than she probably would have done if left alone, and the post-mortem showed that the case must have done badly in the long run. The operation might have succeeded at an earlier period, but later on was it justifiable?

Mr. Barker thought that in hydronepbrosis the tumour would be best reached from the loin. The cause of death in his case was more or less hypothetical. Martin, of Berlin, had operated on a similar case, and there had been no return of the disease one year after.

ASSOCIATION OF SURGEONS PRACTISING DENTAL SURGERY.

Wednesday, March 17th, 1880.

W. A. N. Cattlin, F.R.C.S., President, in the Chair.

On Irregularities of the Teeth and their Surgical Treatment.

Mr. Francis Fox read a paper on this subject, as follows:—In bringing the subject of irregularity in the arrangement of the permanent teeth before you this evening, I do so more with a desire to excite discussion and thereby to benefit from the remarks of others, than with the hope of being able to

impart any knowledge of a special character. I shall endeavour therefore to regard the subject in its broad and general aspect, rather than to indicate any specific methods of treatment. Permit me, then, to occupy a short portion of your time in reviewing the chief physiological facts respecting the development of the teeth and jaws, as a prelude to the consideration of the abnormal circumstances which may occasion their deformity. The germs of the teeth are, as you well know, manifest at a very early period of embryonic existence—those of the temporary series having been demonstrated at about six weeks after conception, and those of the permanent set some months before birth. I need not here dwell minutely on the various periods of development of the dental structures; how the enamel organ is formed by a dipping down of the epithelial layer of the membrane forming the jaws at this epoch; or how the dental organ or papilla consists of a projection of the submucous tissue; or how, about the sixteenth week of intra-uterine gestation, the temporary germs become enclosed in their membranous capsules when calcification commences; or how about this time the germs of the permanent teeth are becoming developed by a reduplication of the oral mucous membrane from the necks of the temporary tooth-germs; or how the calcification of these teeth commences a little before birth. It will suffice that I remind you that the process of development is a very gradual one, and in neither case is it quite completed until some time after the teeth have assumed their ultimate position. We therefore at once perceive how liable they are to be affected by any untoward circumstances which may arise in the course of development and growth of the body. Without doubt the early decay of teeth, which so sadly marks the present generation, is due to mal-nutrition occurring in the earlier periods of life. At about seven months after birth a process of absorption is set up in the walls of the crypt and parts superimposed, and by this process the crowns of the temporary teeth become visible above the surface of the gums. When the crowns of the teeth are erupted, this absorptive action for a time ceases, and a renewal of the developmental process ensues by which the alveoli are built up around the fangs of the teeth. At about four years of age the temporary dentition is perfected, and soon after this perfection is reached absorption again sets in, commencing now in the fangs of the teeth, and these, together with their alveolar processes, are gradually removed, their permanent successors replacing them by a similar process of absorption of crypt and development of alveolar structures. The important point for us to bear in mind is the fact that the alveolar portion of the jaws is developed with each dentition, so that a previous alveolar structure can have little to do with the position of the succeeding teeth, except as it may present an obstacle to their onward progress in consequence of its non-absorption. A few words as to the development of the jaw-bones. These bones consist of two portions—(*a*), an alveolar structure, which we have just seen to be developed with the temporary teeth, absorbed with them, and again redeveloped with the permanent teeth; and (*b*), a basal portion. This base is more prominently marked in the lower jaw, in which the inferior dental canal very emphatically indicates the junction between the two portions of the bone. The base of the jaw when once formed remains in pretty much the same condition throughout life, except in advanced old age, when the muscles of mastication are no longer in full use, and then in a slight degree it becomes wasted. In the superior maxilla at birth the alveolar processes descend but little below the level of the palatal plates, and the anterior and posterior parts are but little developed. As age advances, the alveoli lengthen, and the tuberosities increase in size, and an active development of bone takes place in these situations. The tuberosities are to the upper maxilla what the coronoid processes are to the lower jaw. From these points the alveolar line is lengthened. In the lower jaw an alteration in the position of its articular surfaces and ascending rami, together with an absorption of the coronoid processes, accompanies the development of the posterior permanent teeth. The jaw elongates by additions to its posterior cornua. The capacity of the jaws in childhood is nearly equal to the anterior portions of the adult bones; for the ten anterior teeth of the permanent set in each jaw replace the temporary, and occupy the same position as these, so that this part of the jaw in adult life is pretty much the same as in childhood. If contracted then, it will remain so throughout life, and no subsequent development in the posterior regions will tend to expand it. The replacement of the temporary teeth by their successors is effected by a purely physiological process, and is absolutely independent of pressure. How the cells composing the absorbent papilla effect their work is not, I believe, very satisfactorily understood. There seems, however, to be a physiological law by which the cells in the neighbourhood of a developing tissue have the power of absorbing a mature structure. That pressure has nothing to do with the process may be proved by the fact that in cases in which the shedding of the first teeth has taken place prematurely, a layer of bone has often been observed to intervene between the crown of the advancing tooth and the base of the socket of its predecessor. At the time when the temporary teeth are about to be shed, we notice in the well-developed jaw a decided separation between contiguous teeth; and this circumstance is a fair indication of a future regularity in the succeeding dentition, and a proof that this portion of the jaw has already been prepared to receive the larger permanent teeth. If the process of absorption continues uninterruptedly, the fangs of the temporary teeth will be gradually removed, leaving little more than the shells of the crowns, which readily drop from the gum as their successors are in turn ready to occupy their places. But should any arrest in this process occur (and such is far from an uncommon circumstance), these temporary organs are liable to offer very considerable obstacles to the regular advance of their permanent successors. The causes of irregularity in the position of the teeth may arise during the developmental periods of life, and are then due to a want of proportion in the size of the teeth and jaws, or to a faulty development of the jaw-bones; or the displacement may depend upon some accidental circumstances arising subsequently, such as the prolonged retention of the temporary teeth, the presence of supernumerary teeth, the habit of "thumb-sucking," or the undue pressure from an hypertrophied tongue. There is abundant evidence to prove how frequently such deformity depends upon hereditary influences. The conditions of life to which our race has for so many generations been subjected seem to have lessened the necessity for the broad and well-formed jaws which were so characteristic of our ancestors, and for many years the advances in civilisation have been marked by a deterioration in the capacity of our jaw-bones. Mr. Coleman, in some interesting investigations he made several years ago, found that the percentage of contracted jaws was immeasurably greater in the children of the well-bred population than in those of less refined cultivation. How constantly also do we find certain peculiarities in dentition, such as an absence of one or more of the dental series, occurring in the offspring of parents who have suffered the same defect, showing how strong an hereditary tendency there is to produce abnormalities. The prolonged retention of temporary teeth is frequently associated with irregularity in their successors, and is probably often the cause of such irregularity. The presence of supernumerary teeth in the dental arch may prevent the normal members from assuming their proper places; but doubtless a disproportion of size between the teeth and jaws is of all causes of irregularity the most common. This disparity leads to a crowding of the teeth, sometimes to such an extent as to altogether prevent the eruption of some one or more of the dental series, such remaining impacted in the substance of the jaws. Certain injuries in early life may occasion displacement of the teeth, especially in the lower maxilla, such as the contraction of cicatrices about the face and neck. Mr. Salter, in his work on "Dental Pathology and Surgery," treats the subject of irregularity of the teeth under two heads—(*a*), simple irregularity, in which the misplacement is confined to one jaw, and is independent of the position of the teeth in the opposite jaw; (*b*), compound irregularity, which depends upon the position of the teeth in the opposing jaw. In "simple irregularity," that is, where the misplacement is confined to one jaw, the crown only of the tooth may be irregularly placed, the apex of the root retaining its normal position; or the entire tooth may be displaced or faulty in its development. Such irregular teeth are often entirely removed from the dental arch, and may be impacted in the substance of the jaw-bones. In the former condition, when the apex of the root retains its normal position, much good may be effected by judicious treatment, but in the latter case little can be done to remedy the evil except by

the removal of the displaced tooth. As examples of "simple irregularity" we may mention the appearance of the upper canines above the alveolar ridge, or in the palate, owing to insufficient room for them in the dental arch. An early loss of their temporary predecessors, by permitting the first bicuspid and the lateral incisor to approach each other, is not infrequently the immediate cause of this displacement. Sometimes, however, the undue retention of the temporary canine, or the presence of a supernumerary tooth, will occasion the deformity. In treating these cases we must remember that nature will assist us greatly in the gradual development of the posterior portions of the jaw-bones; but it is often necessary to remove one or more of the posterior teeth before sufficient space can be obtained. Any obstructing temporary or supernumerary teeth should of course be removed; and if, after this proceeding, we have reason to think there will not be sufficient space for the permanent canine to come into its proper place in the dental arch, we must extract one of the posterior teeth. There is frequently some difficulty in determining which tooth shall be sacrificed, and of course if any are decayed they should be selected; but, if all are sound, most authorities recommend the removal of the first permanent molars as being the teeth most liable to decay. But we should take into consideration the age of the patient, for if the deformity has existed for some time, the removal of a bicuspid will more quickly remedy the evil. An overlapping of the incisors is another form of "simple irregularity," and frequently requires for its treatment similar surgical proceedings to those just described; but generally, after having obtained increased space in the dental arch, we must resort to some mechanical appliance in order to obtain regularity in the position of these teeth. Another not uncommon form of irregularity is where an incisor tooth is more or less twisted, sometimes to such a degree that the side of the crown will occupy the position of its anterior surface. A forcible twisting of the tooth into its right position is very generally adopted, and this mode of treatment has a powerful advocate in Mr. Tomes. He suggests that when the displacement is very great the operation of twisting should be gradually performed, a limited movement being made at intervals in order that the alveolar process may the better accommodate itself to the new position of the tooth. Others are averse to this prompt treatment, and suggest the employment of a plate carefully adjusted to the palate, and having certain properly constructed points of resistance. To this mode of treatment I think Mr. Salter most emphatically inclines. An unsightly separation of the central incisors in the upper jaw sometimes occurs, and the teeth may be readily drawn together, but have a great tendency to return to their former position. In treating these cases great care should be taken to prevent the ligature from slipping below the edge of the gum—between the necks of the teeth and the gum,—for the irritation set up by such a mishap has been known to cause the death of the tooth. In order to prevent this displacement of the ligature, a small vulcanite plate may be constructed, to which the ligature can be attached, and thus prevented from shifting its position. A few words upon the second form of irregularity of the teeth—that depending upon the position of the teeth in the opposing jaw. This is much more complicated, and as an example we may cite the "under-hung jaw," in which the "bite" is intersecting; some or all of the six front upper teeth being shut behind the corresponding teeth in the lower jaw. This condition, in its extreme extent, arises in consequence of an undue development of the lower over the upper jaw, or of a want of development in the superior maxillary bones. It may also arise from a retardation in the eruption of the superior incisors, or by these teeth being pushed inwards by the prolonged occupation of the dental arch by their temporary predecessors. An early treatment of this irregularity is all-important, and should consist in preventing the contact of the opposing teeth. This can be insured by the adaptation of a plate to the palate, and covering the posterior teeth so as to prevent the anterior teeth from coming in contact. It may be necessary also to push outward the in-standing upper incisors. An opposite condition of the lower jaw sometimes occurs in which the lower incisor teeth bite close up to the palate, so that they press against the necks of the upper teeth and push them forward. This condition is liable to arise when the six-year-old molars are lost before the second permanent molars have erupted sufficiently to form the necessary 'prop,' in order to prevent an undue closure at the anterior parts of the jaws. A separation of the teeth in the anterior portions of the jaws has been described, and is occasioned by a congenital malformation of the lower jaw. The early obliquity in position of the ascending rami is unduly maintained, and there is a want of development in the alveolar portions of the jaws, especially in the regions of the molar teeth, so that these came into contact before the incisors. This irregularity may be caused by the contraction of a cicatrix in the throat or neck. A remarkable example of this deformity is mentioned by Mr. Tomes. The bicuspid teeth are not infrequently misplaced, and when so they usually occupy a too inward position. This may arise solely from their having been prevented from assuming their proper position in the dental arch by the prolonged retention of the temporary molars. But usually it is dependent upon a diminished capacity of the jaw, and in the upper jaw generally associated with a projection of the incisors, and a more or less elevation of the palate, constituting the V-shaped jaw, or "rabbit mouth." This malformation is congenital, but, except in very exaggerated cases, is not very manifest until the posterior permanent teeth are about to be erupted, when the additions to the superior maxilla have been made in the posterior regions. The newly formed bone, which has been gradually developing, is now found to be placed at an angle with the pre-existing alveolar line. This abnormal development has arisen in order to effect an harmonious arrangement with the other bones of the cranium. The maxillary bones having been imperfectly developed during early childhood, their posterior borders not being sufficiently divergent, the subsequent additions for adult conformation are placed in a wider circle, hence the point of junction between the two parts (the old and the new, so to speak) is marked by an angle of more or less extent. It is usually associated with great delicacy of constitution, and may occur in those of weak mental powers, but is often observed in persons of great intellectual capacity. The treatment of these cases consists in endeavouring to gain increased space in the dental arch, and to diminish the projection of the upper front teeth, but is, as a rule, more or less unsatisfactory. Irregularity in the wisdom-teeth is sometimes met with, and may occasion most serious mischief, when extraction is the remedy. Transposition of the teeth is rare, and is usually met with anteriorly; and also inversion, which is still rarer. In considering the general treatment I have wished to confine my remarks to the surgical proceedings calculated to benefit, and have therefore not dwelt on the mechanical part. The timely extraction of the temporary teeth I believe to be of great importance, as their prolonged retention is the frequent cause of irregularity. In cases of advanced irregularity it is often necessary to sacrifice one or more of the permanent set, and then the choice would generally fall upon the first permanent molars, but under certain circumstances upon the bicuspids.

A discussion then ensued, in which the President, Mr. E. Bartlett, Mr. Gaine, Mr. Parson, and others took part. The President then announced that at the next meeting, on April 21, Mr. Christopher Heath would read a paper on "Thirty-five Years' History of a Maxillary Tumour."

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

FRIDAY, MARCH 19.

JOHN SYER BRISTOWE, M.D., F.R.C.P., President, in the Chair.

The minutes of the last meeting having been read and confirmed, the Council presented a report on the following subjects:—1. The power of vestries or district boards to add ten years in computing the superannuation allowance to retiring officers, in accordance with the terms of Section 5 of the Superannuation Act. The Council resolved that, Mr. Lord having received an addition of ten years' superannuation allowance, it would be inexpedient to report further upon this subject. 2. The advisability of requesting the President of the Local Government Board, either by a deputation from the Society or by a petition, to introduce a Bill into Parliament with the object of making the appointments to the post of medical officer of health throughout the country

permanent. The Council recommend the desirability of making the appointments permanent. 3. The best means by which information of the existence of cases of infectious disease in one metropolitan district can be communicated to the medical officers of health of the other metropolitan districts. The consideration of this question was adjourned to the next meeting. 4. The Metropolis Water Bill. It is not now necessary for the Council to report on this Bill.

The following gentlemen, being balloted for, were duly elected:—Dr. S. Saunders, Medical Officer of Health for the City of London, as a metropolitan member; Dr. F. W. Coates, Medical Officer of Health for Salisbury, as an extra-metropolitan member. Dr. G. B. Longstaff, Southfield Grange, Wandsworth; Mr. N. A. Humphreys, General Register Office, Somerset House; and Mr. Ernest Hart, as Associates.

Mr. H. A. Lawton, of Poole, and Dr. Shea, of Reading, were proposed as extra-metropolitan members.

Mr. Lovett made some remarks upon the quantity of diseased meat now being sold in the poor districts of London. He thought it important that the members of the Society should be thoroughly acquainted with the conditions rendering meat unfit for human food. It would be very desirable if some member having experience in the examination of meat would undertake to give a demonstration before the Society, so as to enable the members to distinguish sound from unsound meat.

Dr. Bristowe alluded to some observations which had been made by Dr. Cayley, in his lectures on typhoid fever at the College of Physicians, in reference to an outbreak of enteric fever in Switzerland, the cause of which was generally attributed to the consumption of diseased meat.

Mr. Lovett had understood that, in the opinion of Drs. Tripe and Gibbon, meat taken from diseased animals, if not trichinous, may be eaten with impunity.

Dr. Wynter Blyth said that it was needful to examine the livers of diseased animals in order to determine what is diseased and what is fit for food.

Dr. Churchill showed for the maker (Mr. Dunning, of Fulham-road) a closet designed, according to plans supplied by himself, with a view to completely isolate it from all drain-connexion. He remarked that sanitary engineers are now generally agreed that the wastes of sinks, baths, etc., should be "cut off" and flow immediately into trapped receivers outside the house, and that the connexion from the waste to the receiver should be as short as possible, reducing to a minimum the possibility of foul pipes inside the house. This system, though found to work well, has so far not been capable of application to the foulest of all drains, viz., the soil-pipe. Whatever arrangements may be made for ventilating drains and soil-pipes, it is found impossible to do so effectually, even with cowls, during the prevalence of fogs in winter and hot sultry weather in summer. He further showed that when the draught of air is greatest up a soil-pipe, then is the danger of sewer-gas finding its way into the house—for example, when one of the upper closets is put in action. The descending column of water, instead of being cylindrical and clinging to the sides of the pipe as we might suppose, is obstructed in its descent by the air in the upcast shaft; the rush of water forcing the air before it, the traps of the lower closet are momentarily unsealed, and sewer-air enter the house, sometimes imperceptibly, and at others with a rush, through the overflow pipe. This has been found in houses constructed upon the most approved sanitary principles. The closet exhibited by Dr. Churchill is constructed to avoid all this. Taking advantage of the Newtonian law of gravitation, the contents of the basin are allowed to fall direct into the mouth of the trap. The basin is provided with a lip, and with the valve-box attached, is supported by the framework above and below. There is a space of about an inch between the mouth of the trap and the free edge of the valve-box. A current of air is admitted by a louvre shutter or air-tube let into the external wall, which circulates round the basin and over the trap, so that any foul air that may pass the trap will be flushed out through the grating into the open air. Ample provision is made for protecting the closet from frost, by the adjustment of the louvre, which, being controlled by a lever inside the closet, may be shut off entirely, or, where the closets are in very exposed situations in the country, by embedding in felt. The mechanical arrangements for flushing the closet and opening the valve are the same as those in general use. A sheet of glass may be let into the framework behind the riser to see that it is all in working order. It is also desirable to have a rabbetted hatchway under the seat for repairing or oiling the valve without disturbing the air-tight chamber. The trap is provided with a funnel-shaped mouth. The same gravitation principle is applicable for baths, sinks, etc.

Several gentlemen, having minutely examined the working of this closet after flushing it with water, commented favourably upon the method of construction.

Mr. Washington Lyon exhibited a model of an improved disinfecting apparatus, and explained its principle. He said that there was no certainty of destroying germs of disease by the use of the most approved disinfectants without at the same time destroying the fabric. The apparatus shown was a small model of an air-tight metal chamber, into which steam was conducted at a high pressure. The apparatus is made to accommodate a mattress of average size. With a pressure of three pounds upon the steam-jet, the fabric may be heated up to 223°. He showed some specimens of delicate material, such as silk tassels, satin braid, etc., side by side with the same materials that had not passed through the process, and it was almost impossible to notice any change in the colour or any damage to the fabric. Leather or fur would be injured; therefore they should be destroyed if likely to be infected with fever-germs. He usually keeps the mattresses in three minutes, and by that time the whole should be disinfected. Letters and valuable documents may be put in without the risk of the ink running or the paper being destroyed.

Dr. Bristowe remarked upon an additional advantage accomplished by this process—viz., the entire destruction of all animal life, parasites, etc. It may be needful to experiment further before concluding that it will destroy all germs of disease.

Dr. Wynter Blyth then made some remarks upon the subject recently before the Council, viz., that of "permanency of tenure" of office. Would it not be better, he said, to ask Parliament to revise the Sanitary Acts, and not to press for permanency of office? No doubt, if the areas were made permanent, there would follow as a consequence permanency of tenure. According to the existing law the local authority may break up areas indefinitely, and thus the officer of health loses his appointment. He doubted if permanency of office would be desirable under present circumstances. The multiplicity of governing bodies is very detrimental to *bonâ fide* sanitary work. One gentleman in Shropshire, for example, spends all his best time in reporting to the thirteen or fourteen authorities of his district, and so the true sanitary work probably gets neglected. What a complicated system of statistical calculation is needed under such splitting of areas! The Local Government Board have confessed that the Sanitary Acts do not work well. Reform in this matter is the more urgent, as the census is about to be taken. There ought to be no distinction between urban and rural health-laws. Many towns are rural in population, but urban in respect of their sanitary laws; and many rural districts are urban in respect of population, but rural in the matter of sanitary control. Many of the local authorities defiantly set themselves to oppose the carrying out of the Public Health Acts.

Dr. Bristowe remarked that it is very desirable that by permanency of office and reduction of local authorities the medical officer of health should obtain that respect and consideration so needful for the proper carrying out of his duties, which cannot be done efficiently where he has to report to several local boards.

Miss Mary Wasey, who recently died at Prior's Court, Chievely, near Newbury, has bequeathed £3000 to the Royal Berkshire Hospital at Reading, £2000 to the Bath Hospital, £2000 to the Cancer Hospital at Brompton, and £2000 to the Consumption Hospital at Brompton.

An Improved Nitrate of Silver Caustic.—Dr. Sawostizki called the attention of the Moscow Surgical Society to an improvement in the preparation of sticks of nitrate of silver. It consists in melting together five parts of nitrate of silver with one part of nitrate of lead, forming an argentum plumbo-nitricum. Sticks formed of this are preferable to those of the ordinary nitrate, as they are not easily broken and can be pointed just like a lead pencil.—*St. Petersb. Med. Woch.*, March 25.

OBITUARY.

JAMES HINDMARSH BARNES, L.R.C.P.E., M.R.C.S.

At an age when most men are full of life and vigour, and after many years of suffering heroically endured, this able and most lovable man died at Liverpool on the 19th inst. Dr. Barnes, soon after the completion of his surgical training at Charing-cross and the Westminster Ophthalmic Hospitals, where he was a favourite pupil of Hancock and Guthrie, came to Liverpool, and, on the death of the late Mr. Fletcher, was appointed Visiting Surgeon to the large Workhouse Hospital. The fine field thus laid open to him was cultivated with great ability and success, and he was rapidly rising to the highest rank as a surgeon when the unfortunate accident occurred which ultimately led to his death at the age of forty-seven.

In a paper, which he published a few years since on "Syphilis and Syphilitic Affections of the Nervous System," and in which his own case is depicted with great vividness and force, he tells us that in June, 1866, while passing through the wards of the lying-in hospital, at the request of a nurse he hastily examined a patient, being quite unconscious at the time that she was the subject of syphilis, and that he himself had a scratch upon the knuckle of the index finger of the right hand. Years of suffering, and at length death, were the result. Three weeks afterwards "a hard brawny swelling of a deep purple colour and about the size of a horse-bean made its appearance on the finger." The nature of this swelling and of the superficial ulcer at its summit not being at first suspected, mercurial treatment was not adopted for some time. There followed a long train of effects, of which non-suppurative inflammation of the right axillary glands, a general macular eruption, and nodes on the right clavicle and right ramus of the lower jaw, were the earliest. Early in September of the same year the first of a series of nervous symptoms, which, with little intermission, lasted during the remainder of his life, and blighted all his professional prospects, made its appearance as a sudden acute pain over the sternum and right side, so severe as to make movement and breathing extremely difficult. Violent pains in the head, with grave disturbances of sight and hearing, and, later on, ataxic symptoms, supervened. Jonathan Hutchinson, Berkeley Hill, Russell Reynolds, and other gentlemen in the metropolis and elsewhere were consulted. Aix-la-Chapelle, Ben Rhydding, and Woodhall Spa were successively visited, but still, with occasional intervals of apparent retrocession, the disease surely advanced. During all these years he maintained a most heroic struggle against the accumulating ills that confronted him, and though racked with almost constant pain, and disturbed by symptoms even harder to bear than pain itself—such as hemiopia, diplopia, ptosis, muscular tremors, and ataxy—went through his professional duties till 1874, when, on the death of the Superintendent Registrar, he was appointed by the Select Vestry to succeed to the post as some compensation for the fearful injuries which he had received in their service.

For five years, amid continual bodily suffering, but with a mind undimmed and even hopeful to the last, he performed the duties with scrupulous fidelity and unflinching courage; and even on the morning of the 19th, the very day of his fatal collapse, expressed the wish to be taken as usual to his office, and was only kept back from having it gratified by a consciousness that the hand of death was laid heavily upon him.

He left a memorandum in which he desired that a post-mortem examination of his body should be made; and that cremation should be practised if that method of disposing of the dead were legal,—if not, that he should be buried. The first wish was respected, and the results will, in due time, be published, though even now it can be said that large hard deposits on the posterior roots of the lumbar and sacral nerves, and gross and obvious changes in the posterior columns of the cord, amply explain many of his most painful symptoms.

He was in every respect a remarkable man, and one far above the ordinary standard. There was seen in him the very rare combination of a most keen, critical, and discriminating intellect with the tenderest emotions, that brought him into close sympathy with all sensient beings. One manifestation of this side of his character was an extreme fondness for the lower animals; and one or another of a number of domestic pets was always by his side, chief among them being a blind, aged, and by no means amiable Skye terrier, whose life he had twice saved, and who, apparently conscious of safety and sympathy when near him, would, though sightless, always make his way to the sofa where his master reclined, and never failed, even in the midst of the keenest sufferings, to obtain the caresses that he sought. But perhaps the most attractive feature of all, in a character otherwise singularly noble and pure, was a transparent honesty of purpose that admitted of no disguise. It seemed to the writer, who, because he knew him most intimately, mourns him most deeply, that it would have been impossible for him to have conceived a mean, low, or dishonourable thought, much less to have committed a mean action; and the affection with which the beauty of his character inspired those who knew him was manifested by the tenacity with which some of his oldest patients adhered to him, and by the grief with which they, and not a few of his professional brethren, followed him to the grave.

MEDICAL NEWS.

Apothecaries' Hall, London.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, March 25:—

Honman, Andrew, 26, Weymouth-street, W.
Newnham, Ernest Edmund, Charing-cross Hospital.
Permewan, Arthur Edward, Redruth.
Rout, Charles, Silwood-place, South Kensington.

The following gentlemen also on the same day passed their Primary Professional Examination:—

Adams, Joseph, Edinburgh Royal Infirmary.
Crane, Charles Robert, Charing-cross Hospital.

BIRTHS.

Deane.—On March 23, at 42, Albion-road, Stoke Newington, N., the wife of John Deane, M.R.C.S., L.R.C.P., of a son.

Dickson.—On March 20, at 33, Albany-street, Edinburgh, the wife of Frank K. Dickson, F.R.C.P.E., Wye House, Buxton, of a son (Francis Henry).

Hutcheson.—On March 1, at Chunar, the wife of Surgeon George Hutcheson, M.D., Garrison and Civil Surgeon, of a son.

Lyle.—On March 23, at 19, Westbourne-square, Bayswater, the wife of William Vacy Lyle, M.D., of a daughter.

Salt.—On March 26, at Egremont, Bournemouth, the wife of Henry Salt, M.D., of a son.

Smyth.—On March 24, at Ashmansworth, Hants, the wife of Arthur Vereker Smyth, Surgeon R.N., of a daughter.

Walker.—On March 28, the wife of Arthur de Noé Walker, M.D., of a son.

MARRIAGES.

Archer—Coulter.—On March 23, at South Kensington, Edward John Archer, M.B., of Southampton, to Susannah, younger daughter of the late Henry Coulter, Esq., of Chatham, Kent.

Hodson—Wienholt.—On March 30, at Herne-hill, Henry Algernon Hodson, M.R.C.S., L.R.C.P., of Bovey Tracey, South Devon, to Sarah Wormald, daughter of William Wienholt, Esq., J.P., of Llanwern, Monmouthshire.

DEATHS.

Barlow, Matilda Mary Ann, wife of Robert Barlow, M.R.C.S., at Norfolk House, Albion-road, Dalston, on March 18.

Corbett, A. P. M., M.D., Brigade Surgeon, at the Garrison Hospital, Haslar, on March 25, aged 47.

Fripp, Henry Edward, M.D., at 6, Arlington-villas, Clifton, on March 23, aged 63.

Heaton, John Deakin, M.D., F.R.C.P., J.P. West Riding, at Claremont, Leeds, on March 29, aged 62.

Kingston, Strickland Kearney, M.D., at Sunnylands, Bath, on March 27, in his 78th year.

Martin, Mary Louisa, daughter of Surgeon-Major W. T. Martin, M.D., A.M.D., at Richmond, Limerick, on March 23, aged 7.

Nash, Joseph, M.D., at 59, Pulteney-street, Bath, on March 24, aged 58.

Roberts, William Alfred, M.D., at 47, Queen-street, Edinburgh, on March 23, aged 70.

Waddell, Caroline Elizabeth Margaret, wife of J. Craig Waddell, M.D., at Tombland, Norwich, on March 26.

Wilkinson, John Beach, son of J. Cooper Wilkinson, M.R.C.S., at Ashford, Kent, on March 29, aged 15 months.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

Bath General Hospital, Bath (Mineral Water Hospital).—Registrar. Applications, with testimonials, to be sent in before April 21. (*For further particulars see Advertisement.*)

Birmingham Friendly Societies' Medical Institution.—Medical Officer Candidates must be married, above thirty years of age, and registered under the Medical Act. Applications, with recent testimonials, to be sent to the Secretary, Mr. Frederick Girling, 25. Phillips-street, Summer-lane, Birmingham, on or before April 9. (*For further particulars see Advertisement.*)

Dental Hospital of London, Leicester-square, W.—House-Surgeon. Applications to be sent to the Honorary Secretary at the Hospital, on or before April 14.

French Hospital and Dispensary, 10, Leicester-place, Leicester-square, W.—Resident Medical Officer. Candidates must be duly qualified, and able to speak French. Applications, with testimonials, to be sent to F. Sorel, Esq., Assistant-Secretary, as early as possible.

Isle of Wight Union.—Medical Officer. The election will take place on April 15. Applications to be sent to the Clerk's Office, Newport, up to April 14.

Notting-hill Provident Dispensary.—House-Surgeon. Applications, with testimonials, to be sent to the Hon. Secretary, W. P. Collins, Esq., 8, Pembridge-gardens, Notting-hill, W., on or before May 25. (*For further particulars see Advertisement.*)

Queen Charlotte's Lying-in-Hospital, 191, Marylebone-road, N.W.—Resident Medical Officer. Candidates must be duly qualified, and have passed examinations in midwifery. Applications, with copies of testimonials, to be sent to A. Phillips, Esq., Secretary, on or before April 5.

Queen's Hospital, Birmingham.—Resident Physician. Applications, with testimonials and certificates of registration, to be sent to T. D. Fosbroke, Esq., Secretary, on or before April 8.

Sheffield General Infirmary.—Assistant House-Surgeon. Applications, with testimonials, to be addressed to the Secretary of the Medical Staff of the Infirmary, on or before April 10. (*For further particulars see Advertisement.*)

Worcester County and City Lunatic Asylum.—Junior Assistant Medical Officer. Candidates must be duly qualified and registered, unmarried, and not above thirty-five years of age. Applications, with testimonials, to be sent to Dr. Sherlock, at the Asylum, on or before April 24. (*For further particulars see Advertisement.*)

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Abingdon Union.—Mr. J. H. Daly has resigned the Third District: area 13,334; population 3027; salary £96 per annum.

Alnwick Union.—Dr. A. J. Main has resigned the Lesbury District: area 9319; population 2319; salary £25 per annum.

Cranbrook Union.—Mr. A. A. Blakiston has resigned the Benenden District: area 6600; population 1553; salary £43 per annum.

Holywell Union.—Mr. David Griffiths has resigned the Second Division of the Whitworth District: area 7840; population 3890; salary £42 per annum.

Meriden Union.—The Meriden District is vacant: area 17,791; population 4284; salary £75 per annum. Also the Workhouse: salary £25 per annum.

Prescot Union.—Mr. Richard Gorst has resigned the Huyton District: area 10,382; population 5155; salary £15 per annum.

Salford Union.—Dr. Mercier has resigned the office of Assistant Resident Medical Officer at the Workhouse: salary £180 per annum.

Sudbury Union.—The Fourth District is vacant by the death of Mr. T. Walter Waring: area 11,677; population 3735; salary £62 per annum.

Wangford Union.—The Bungay District is vacant by the death of Mr. Edward Burman Adams: area 15,384; population 6331; salary £90 per annum.

Wilton Union.—The Fovant District is vacant by the death of Mr. R. R. Clay: area 10,790; population 2133; salary £55 per annum.

APPOINTMENTS.

Basford Union.—John T. Knight, M.R.C.S. Eng., L.S.A., to the Carlton District.

Belford Union.—Charles C. Burman, L.R.C.P. Edin., L.R.C.S. Edin., to the West District and the Workhouse. James G. Macaskie, L.R.C.P. Edin., L.R.C.S. Edin., to the East District.

Cricklade and Wootton Bassett Union.—J. W. Kirkman, M.R.C.S. Eng., L.R.C.P. Edin., to the First District.

Festiniog Union.—Richard T. Jones, L.F.P.& S. Glasg., L.S.A., to the Llanfihaugely Traethan District.

Huddersfield Union.—Peter McGregor, L.R.C.P., L.R.C.S., to the Crosland Moor Workhouse.

Leeds Union.—John K. Pickford, M.R.C.S. Eng., L.R.C.P. Lond., as Assistant Medical Officer at the Workhouse.

Pontardawe Union.—Thos. M. Andrews, L.R.C.P. Edin., L.F.P.& S. Glasg., to the Workhouse.

Romford Union.—James Shimeld, L.R.C.P. Edin., L.R.C.S. Edin., L.A.H. Ire., to the Fourth District.

The Electric Light on the Victoria Embankment.—The Metropolitan Board of Works is to be congratulated on the steps it has taken to insure a fair trial for the new system of lighting by electricity. At their last week's meeting the Works and General Purposes Committee presented a report stating that they had had under consideration the question of the desirability of continuing the electric lighting on the Victoria Embankment and Waterloo-bridge, the existing contract for which will expire on April 10 next, and they had had before them a letter from the French Electrical Society expressing their willingness to continue the lighting at a slightly lower rate than that now charged, on condition that the new contract should be for a period of at least one year. Having carefully considered the question, the Committee had come to the conclusion that the proposal was one which the Board might be advised to accept, and they recommended "that the offer be accepted, and that it be referred back to the Committee to carry the arrangement into effect." After some slight opposition, this was eventually agreed to, and probably this great improvement in the lighting of these important thoroughfares will, in the end, become permanent.

Dr. Mooren's Jubilee.—Geh. Sanitätsrath Dr. Mooren, one of the most celebrated ophthalmologists in Germany, has recently celebrated, at Düsseldorff, a rare form of jubilee. He has entered on his list his 100,000th patient, having performed 16,765 great operations, 3700 of the number being for cataract. The town celebrated the event with festivities.—*Berlin. Klin. Woch.*, March 8.

The Swammerdam Medal.—At the invitation of the Amsterdam Society for the Advancement of Natural and Medical Science a number of naturalists and physicians met on February 17, in the old French Church of that city, in which Jan Swammerdam is interred, in order to celebrate the 200th anniversary of the death of that celebrated anatomist. After Prof. Dr. Stokvis, the President of the Society, had delivered an eloquent address setting forth the great services rendered to science by Swammerdam, he communicated to the assemblage the fact that the Society, in order to form an enduring memorial, had resolved to found a Swammerdam Medal, which should be awarded every ten years to those *savants* who had most distinguished themselves in the branches of science cultivated by Swammerdam. The medal is to be awarded for the first time in September, 1880. Memorial stones have also been placed on his tomb, and on the house in which he dwelt.—*Zoologischer Anzeiger*, March 8.

The Mud-Banks of the Thames.—The twenty-fourth day of the Board of Trade inquiry into the alleged formation of banks in the Thames by the discharge of sewage from the outfalls of the metropolitan drainage was wholly occupied by the summing up by Mr. Bidder, Q.C., of the negative case on behalf of the Metropolitan Board of Works. After adducing arguments to show that the banks in the river were formed by operations which had been undertaken by the Conservators themselves, he concluded his address by submitting, on the part of the Metropolitan Board, that they had met the case and answered it completely, and that the tribunal could make no other report to the Board of Trade than that there was no proof that these banks had arisen from the flow of sewage from the outfalls; but, on the other hand, he hoped, if they were of that opinion, they would make their report definite, because this was a matter that had been kept in agitation for years, and it was much better that it should be authoritatively and satisfactorily decided, and that the public should know once for all that the bugbear "pollution" was a bugbear that had no foundation in fact. At the conclusion of Mr. Bidder's address the proceedings were further adjourned.

Compression in Orchitis.—Dr. Octavius White, of New York, after criticising the defects of the usual modes of applying compression in orchitis, describes (*New York Med. Record*, January 29) an apparatus which he has devised, and which he says succeeds admirably. It consists of a thin shell-shaped shield made of hardened caoutchouc. "The prominent features of this scrotal shield, support, and compressor are—remarkable lightness, the weight not exceeding eight grammes; great readiness and facility of application; consummate command afforded the surgeon over the degree and duration of direct pressure to the testicles, either singly or collectively; uniformity, firmness, and general diffusion of compression; entire painlessness during its application and removal, even though the scrotum be well covered with hair; and finally, perfect cleanliness, the fixture being so conveniently taken off and washed. In cases of varicocele and indolent sarcocele, upon which this instrument has been kept steadily applied, the relief has been speedy and highly satisfactory. Pending the necessary course of treatment in distressing cases of neuralgia of the testis, I invariably employ it with the most happy effects. When no other covering could possibly be borne upon the irritable organ, this has not only afforded protection and ease, but has enabled the patient to go about unrestrained in the open air and attend to his ordinary avocations." A woodcut of the shield is given.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Sergeant-Surgeons.—You will find the information you request about sergeant-surgeons, and the names of those who have held the office, in the *Medical Times and Gazette*, July, 1867.

The late Dr. O'Leary, M.P.—It may possibly be in the recollection of some of our readers that, at the trial of Kelly for the slaying of the Police-constable Talbot in 1871, Dr. O'Leary assisted at the post-mortem examination which was made. A valued colleague in Dublin, Dr. Humphrey Minchin, has aptly described in the following distich Dr. O'Leary's manner on the occasion :—

On a Medical M.P. who disliked making a P.M.

"Non vitat digitis tractare cadavera cautis;
Artem ac sanguineam *doctor olere* timet."

M.R.C.S.—Being a misdemeanour only, we do not think the name will be erased from the list of members of the College of Surgeons, of which the person mentioned is a member.

Poisonous Wall-Paper.—It would appear that, notwithstanding the attention which was publicly drawn some time ago to this subject, house decorators have not taken warning. Recently a child was attacked with serious illness. The symptoms indicated poisoning by arsenic. The paper on the nursery walls was examined by an analyst, and found to be "unfit for use." It was heavily loaded with arsenic, which the medical attendant suspected. It is stated that the child "will probably escape with its life, but with impaired health and constitution."

A Third-Year's Student, Manchester.—You will find the questions not only for the diploma of Member, but also of Fellow, published in the Calendar of the Royal College of Surgeons. Send 1s. 5d. in stamps to the Secretary.

The Bearing-Rein.—The increasing disuse by medical men of the bearing-rein is very satisfactory, and may be furthered by the following declaration on the subject, to which the signatures of nearly six hundred veterinary surgeons in different parts of the country are appended :—"We, the undersigned veterinary surgeons, are of opinion that the use of the bearing-rein, when tightly applied, is painful and irritating to horses, is directly or indirectly productive of disease when regularly worn, and by its mechanical action greatly hinders horses from employing their full strength. For the above reasons, on the plea of utility as well as of humanity, its use should be discontinued."

"Chirurgeon."—So long ago as 1733, Mr. Paul, a surgeon at Stroud, Gloucestershire, "extracted from the kidney of a woman, by an incision through her back, a rough stone as large as a pigeon's egg, and made an entire cure."

Steam Boiler Explosions.—From the annual report, just published, of the Manchester Steam Users' Association, it appears that during the year 1879 there had occurred throughout the country 25 explosions from steam boilers, killing 40 persons and injuring 25 others, and in addition there had also been 22 miscellaneous explosions, killing 15 persons and injuring 36 others. It may be stated that the Association is not established for profit, but for the public good, to prevent the sacrifice of human life from steam boiler explosions, and it appears that by the periodical inspection adopted its members enjoy practical immunity from explosions. Such a result is a strong recommendation in favour of compulsory inspection under Government authority by competent persons duly authorised and registered.

The Metropolitan Death-Rate.—During the past eleven weeks of the current quarter the death-rate in London has averaged 28·0 per 1000, against 22·7, 25·7, and 26·6 in the corresponding periods of 1877, 1878, and 1879.

The St. Gothard Tunnel.—In reference to the disease from which the navvies employed in this tunnel are suffering, a Messina doctor states that the form of trichinosis in question exists in Sicily and all parts of Italy, chiefly the marshy districts. He directs his patients to avoid drinking turbid water, or putting their hands, when soiled, to their mouths, the parasites being generally introduced in this way; but he is told that in Brazil two drugs are universally used as an effective specific.

A Workhouse Dispenser and the General Elections.—At the last meeting of the Holborn Guardians the question was raised whether workhouses could legitimately be used for the exhibition of electioneering placards. A guardian who "had always understood that the Board had nothing to do with politics," was much surprised to see the workhouse in Farringdon-street placarded with the posters of one of the candidates for the Borough, and a portion of the building made use of for one of the candidates by bills being exhibited in the windows of the dispensary-room. The dispenser, in reply to his inquiry on the matter, said "he would do as he pleased." The guardian thought neutrality was indispensable, and moved that the clerk be instructed to write to the dispenser, calling attention to the exhibition of bills in the windows of his room,—which was ultimately, after some desultory discussion, carried.

Diphtheria in Russia.—In consequence of the increasing ravages of diphtheria in the province of Kharkoff, nineteen different sanitary detachment of doctors and nurses have been sent there to combat the disease.

THE PRIMATE OF ENGLAND ON THE USE OF WINE AND RUM.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In the deeply touching "Memoir of Catherine and Craufurd Tait," lately published with the sanction of the Archbishop of Canterbury, there is an account of a very serious accident which befel him during an excursion on the coast of Scotland. Returning in the dark, the ship was so steered as to be grounded on some rocks, and was in considerable danger. The passengers and part of the crew were landed in a boat, and passed the night in cold, wet, and misery, on the surface of a rocky island, crouching under a tarpaulin which they fortunately brought with them in the boat; besides, "the foresight of the doctor, or some other kind genius," says the Archbishop, "had sent in the boat a bottle of sherry and two bottles of rum." After a miserable night they had the satisfaction at daybreak of seeing the ship afloat and at anchor near the shore, having mercifully escaped damage. The party returned on board. "Very thankful were we," says the Archbishop, "when the captain welcomed us back, and the doctor gave us mulled port to warm us."

The Archbishop is President of the Church of England Temperance Society, some members of which go about the country denouncing the use of alcohol in all shapes as wicked and pernicious. It is clear that these fanatical doctrines are not held by the President.

Yours, &c., DATE VINUM PERITURO.

Philanthropist.—The St. John Ambulance Association has now established seventy-seven centres in different parts of the United Kingdom, exclusive of fifty-nine detached classes formed pending the establishment of permanent centres.

Volunteer Bands and Hospitals.—The secretary of a metropolitan hospital has directed public attention to the annoyance to the patients by street music, which we commend to the notice of the recently organised Society for the Abolition of Street Music. His special reference, however, to the volunteer bands, and his suggestion that the commanding officers should request the bandsmen to cease playing when passing these institutions, will, we have no doubt, receive the courteous attention necessary to secure the discontinuance of the annoyance and of any future complaint on the subject.

A New City Coffee-Tavern.—The basement vaults of the Royal Exchange have been converted into an immense saloon coffee-tavern by the National Coffee Public-House Company. The spacious central saloon will accommodate 1000 diners.

Another Dissatisfied Water-Rate Payer.—The first year the metropolitan water companies were compelled to render accounts of their income and expenditure to Parliament was in 1871. The water rents of the eight companies were then returned at £1,052,000. The latest accounts, published in 1878, show the amount was £1,386,000, or an increase of 32·7 per cent. During that period the addition to the population was only about 17 per cent., consequently the companies, by simply raising their rates, obtained nearly half of their additional income.

Jerrold D.—1. 1871. 2. When the Government of India informs the Home Government that it wants such and such a number of medical officers, the latter publicly announces that such a number will be selected by competitive examination.

Repeated Amercements.—Those opposed to vaccination, no doubt, embrace various classes—fanatics, men with honest convictions, and quacks. These persons describe vaccination as blood-poisoning, and as being a totally ineffectual remedy against the small-pox. Many parents in consequence take very decided views, and are conscientiously antagonistic to vaccination. In such cases fines have little effect in inducing them to act contrary to their belief.

A Substitute for Malt.—A publican, of Philip-street, Hoxton, has been fined £200, at the Worship-street Police-court, for having on his premises a solution of sugar, which is used as a substitute for malt. The Excise prosecuted. It was said to be proved that the solution would be very deleterious to health.

A Cremationist, London.—A gentleman, lately deceased, at Kensington, by his will directs his executors to have his body burnt by the Cremation Society's process (unless that be interdicted by law) in the simplest manner possible, with a decent regard to the occasion. His ashes they are to deal with as they please, or give them to the winds and rains of heaven to sweeten for further use in nature's wise economy.

COMMUNICATIONS have been received from—

Mr. WALTER AUSTIN, London; Mr. J. HAMILTON CRAIGIE, London; Dr. W. CARTER, Liverpool; Dr. ARCHIBALD, University of St. Andrews; THE SECRETARY OF THE POLYTECHNIC INSTITUTION; THE SECRETARY OF THE HOSPITAL FOR SICK CHILDREN; THE REGISTRAR OF APOTHECARIES' HALL, London; Mr. SHIRLEY MURPHY, London; Mr. CLEMENT LUCAS, London; Dr. WOLFE, Glasgow; THE EDITOR OF "IRON"; THE REGISTRAR-GENERAL, Edinburgh; THE SECRETARIES OF THE MEDICAL SOCIETY OF LONDON; Mr. J. CHATTO, London; THE SECRETARY OF THE DEVONSHIRE HOSPITAL; THE SECRETARY OF THE LOCAL GOVERNMENT BOARD; Dr. CLEMENT GODSON, London; THE SECRETARY OF THE NORTH LONDON HOSPITAL; THE HON. SECRETARY OF THE ONONTOLOGICAL SOCIETY OF GREAT BRITAIN; Dr. J. W. MOORE, Dublin; Dr. DRUITT, London; Dr. H. W. ACLAND, Oxford; Dr. W. ROBERTS, Manchester; THE SECRETARY OF THE ROYAL INSTITUTION, London; Lieut.-Col. FRANK BOLTON, London; THE SECRETARY OF THE CLINICAL SOCIETY, London; Messrs. S. KING AND CO., London; Dr. E. S. THOMPSON, London.

BOOKS, ETC., RECEIVED—

Notes on Physiology, by Henry Ashby, M.D. Lond.—Sussex County Lunatic Asylum (Hayward's-heath) Annual Report for 1879—Return of Births, Deaths, and Marriages registered in the Punjab during the Week ending January 24, 1880—Yellow Fever and the National Board of Health—On the Treatment of Endometritis, by J. Hickinbotham, M.D., M.R.C.P.Edin.—Report of the Junior Army and Navy Stores (Limited).

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Centralblatt für die Medicinischen Wissenschaften—Nature—Revue Médicale—Occasional Notes—Gazette Hebdomadaire—Louisville Medical News—Boston Medical and Surgical Journal—El Siglo Medico—Index Medicus—American Bookseller—Calcutta Medical News—National Anti-Compulsory Vaccination Reporter—Indian Medical Gazette—Gazette degli Ospitali—St. Louis Courier of Medicine—Deutsche Medicinal-Zeitung—Philadelphia Medical Times—Government Gazette, Queensland—Centralblatt für Gynäkologie—Medical Gazette—National Board of Health Bulletin, Washington—Naturalist's Leisure Hour and Monthly Bulletin—Students' Journal—Guy's Hospital Gazette.

APPOINTMENTS FOR THE WEEK.

April 3. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

5. Monday.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

ROYAL INSTITUTION, 5 p.m. General Monthly Meeting.

ODONTOLOGICAL SOCIETY, 8 p.m. Casual communications from Mr. H. Sewell "On Dental Diseases as a Cause of Epilepsy," from Mr. G. H. Harding "On a Simple Contrivance to be Employed in the Insertion of certain Gutta-Percha Fillings." Discussion on Mr. Oakley Coles' paper, "On Deformities of the Jaw: an Attempted Classification of them."

MEDICAL SOCIETY OF LONDON, 8½ p.m. Dr. C. T. Williams, "On a Case of Gastric Ulcer treated by Nutritive Injections." Mr. Malcolm Morris, "On the Therapeutical Value of Arsenic in Cutaneous Disease."

6. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

ROYAL INSTITUTION, 3 p.m. Prof. Huxley, "On Dogs, and the Problems connected with them."

PATHOLOGICAL SOCIETY, 8½ p.m. Mr. Startin—Sections of Molluscum Contagiosum. Dr. Thin—Sections and Photographs of Elephantiasis. Mr. Walsham—Horny Growth from Eyelids. Mr. Godlee—Melanosis of Finger. Dr. Barlow—Congenital Syphilitic Disease of Larynx. Dr. Vincent Harris and Mr. A. Doran—Sections of Spinal Cord from a Case of Tetanus after Ovariotomy. Dr. Allen Sturge—Congenital Syphilitic Disease of Larynx. The President—Multiple Ivory-Patch Morphœa in process of Rapid Recovery (living specimen). Mr. Morrant Baker—Skin Disease, probably Lichen Ruber (living specimen). Mr. Samuel G. Shattock—Recent Division of the Tendo-Achillis. Dr. William Ewart—Ramifying Cyst in the Brain. Mr. Eve—1. Calcareous Tumour Loose in Abdominal Cavity; 2. Aneurism by Anastomosis of the Ear; 3. Laryngeal Perichondritis in Typhoid Fever and in Small-pox. Mr. Sydney Jones—Elongation of Limb in connexion with Knee-Joint Disease. Dr. Pearson Irvine—Aortic, Mitral, and Tricuspid Constriction.

7. Wednesday.

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Lister), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.; National Orthopædic, Great Portland-street, 10 a.m.

HUNTERIAN SOCIETY (London Institution), (Council Meeting, 7.30 p.m.) 8 p.m. Mr. Jacobson will show a Case of Gastrotomy. Dr. Fletcher Beach will read a paper on "Types of Imbecility."

OBSTETRICAL SOCIETY, 8 p.m. Specimens will be shown by Drs. Galabin, Bantock, Godson, Murphy, and Roper. Papers: Dr. Godson, "On Removal of Fibroid Outgrowth from Fundus Uteri: Recovery." Mr. Knowsley Thornton, "On Removal of Uterine Fibroids by Laparotomy." Dr. John Williams, "On some Periodical Changes which occur in Fibroid Tumours of the Uterus, and their Significance."

8. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

ROYAL INSTITUTION, 3 p.m. Prof. Tyndall, "Light as a Mode of Motion."

9. Friday.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

QUEKETT MICROSCOPICAL CLUB (University College), 8 p.m. Meeting.

ROYAL INSTITUTION, 8 p.m. Prof. Huxley, "Coming of Age of the Origin of Species."

CLINICAL SOCIETY, 8½ p.m. Mr. Nettleship, "On Two Cases of Sympathetic Ophthalmitis setting in Three Weeks after Excision of the other Eye." Mr. Marsh, "On some Cases of Bone-setting, with Remarks." Mr. Barwell, "On Section of the Femur above the Small Trochanter for Angular Anchylosis of the Hip." Mr. Chetton, "On a Case of Acquired Hypertrophy of One Limb." Dr. Stephen Mackenzie will exhibit a Case of Elephantiasis treated by Elastic Bandages.

VITAL STATISTICS OF LONDON.

Week ending Saturday, March 27, 1880.

BIRTHS.

Births of Boys, 1342; Girls, 1242; Total, 2584.
Corrected average in the 10 years 1870-79, 2618·7.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	766	739	1505
Average of the ten years 1870-79, corrected to increased population	889·6	881·0	1770·6
Deaths of people aged 80 and upwards ...	...	...	39

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa
West	561359	...	5	3	1	19	...	3	...	3
North ...	751729	1	4	13	2	33	...	2	1	1
Central ...	334369	...	3	2	...	10	...	1	...	...
East	639111	2	2	6	1	13	...	3	...	2
South	967692	1	6	23	1	40	2	5	1	3
Total	3254260	4	20	46	5	115	2	14	2	9

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	30·048 in.
Mean temperature	42·4°
Highest point of thermometer	61·4°
Lowest point of thermometer	28·8°
Mean dew-point temperature	34·7°
General direction of wind	E.N.E.
Whole amount of rain in the week	0·00 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, March 27, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1880.*	Persons to an Acre. (1880.)	Births Registered during the week ending Mar. 27.	Deaths Registered during the week ending Mar. 27.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3664149	48·6	2584	1505	61·4	28·8	42·4	5·78	0·00	0·00
Brighton	107321	45·6	67	24	60·0	33·0	42·8	6·00	0·00	0·00
Portsmouth ...	134224	29·9	83	45	...	...	...	...	...	...
Norwich	85827	11·5	45	39	55·0	34·0	40·7	4·83	0·00	0·00
Plymouth	74993	53·8	32	46	55·8	36·3	45·0	7·22	0·43	1·09
Bristol	213536	48·0	137	93	63·5	27·5	41·6	5·34	0·00	0·00
Wolverhampton ...	75970	22·4	46	29	58·6	27·1	39·0	3·89	0·00	0·00
Birmingham ...	394738	47·0	302	172	...	...	...	...	...	...
Leicester	129912	40·6	112	48	60·0	30·0	42·4	5·78	0·00	0·00
Nottingham ...	173627	17·4	130	89	58·0	27·1	40·8	4·89	0·00	0·00
Liverpool	544056	104·4	392	247	58·5	31·0	41·4	5·22	0·00	0·00
Manchester ...	363130	84·6	225	167	...	...	...	...	...	...
Salford	185786	35·9	127	79	...	...	...	...	...	...
Oldham	115413	24·7	67	50	...	...	...	...	...	...
Bradford	197196	27·3	104	87	52·9	33·6	39·8	4·34	0·00	0·00
Leeds	318929	14·8	206	124	51·0	33·0	40·9	4·94	0·0	0·00
Sheffield	304939	15·5	216	131	46·0	29·5	38·3	3·50	0·00	0·00
Hull	149627	41·2	91	58	49·0	27·0	38·8	3·78	0·07	0·18
Sunderland ...	116730	42·2	89	51	50·0	34·0	40·0	4·44	0·00	0·00
Newcastle-on-Tyne	149366	27·8	85	60	...	...	...	...	...	...
Edinburgh	229839	54·8	149	116	50·3	28·2	39·2	4·00	0·00	0·00
Glasgow	589598	97·7	369	285	51·5	30·8	40·7	4·83	0·00	0·00
Dublin	314666	31·3	211	221	52·0	26·8	41·4	5·22	0·09	0·23
Total of 23 Towns in United Kingdom	8633571	39·2	5869	3767	61·4	26·8	40·9	4·94	0·03	0·08

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 30·05 in. The highest reading was 30·18 in. on Tuesday morning, and the lowest 29·88 in. on Friday at noon.

* The figures for the English and Scottish towns (except for Nottingham, Salford, and Oldham) are the numbers enumerated in April, 1871, raised to the middle of 1880 by the addition of nine years and a quarter's increase, calculated at the rate which prevailed between 1861 and 1871. Revised estimates have been adopted for Nottingham, Salford, and Oldham, based upon special returns of inhabited houses existing within those boroughs. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

THE LUMLEIAN LECTURES

ON THE

DIGESTIVE FERMENTS AND THE PREPARATION AND USE OF ARTIFICIALLY DIGESTED FOOD.

Delivered before the Royal College of Physicians.

By WILLIAM ROBERTS, M.D., F.R.C.P., F.R.S.,
Physician to the Manchester Royal Infirmary;
Professor of Clinical Medicine to the Owens College.

Lecture I.—Part II.

The Preparation of Artificial Digestive Juices.

The study of the digestive ferments has been immensely facilitated by a method first introduced by Eberle. Eberle discovered that an aqueous infusion or extract of the digestive glands possessed the same properties as the natural secretions or juices of those glands. The reason of this is that the glands which secrete the digestive juices contain within them a reserve stock of their respective ferments. Accordingly, when the glands are infused in water their reserve stock of ferments passes into solution. These infusions or extracts then constitute artificial digestive juices which operate in a flask or beaker in the same way as the corresponding glandular secretions act in the alimentary canal. Solutions of organic matters are, however, extremely perishable—they pass quickly into putrefaction. In order to obviate this inconvenience, and to obtain an extract which is always handy for use, various preservative means have been employed. Bernard used carbolic acid; others have used glycerine or common salt. These preservatives, although perfect for the purpose intended, have a pronounced taste which it is impossible to get rid of. I have made a good number of experiments on this point. As the ultimate object I had in view was to obtain a solution which could be administered as a medicine by the mouth, or which could be employed in the preparation of artificially digested food, I sought for a preservative which either had little taste and smell, or one which was volatile and could be got rid of by vaporisation. After a good many trials I adopted the three following solutions as on the whole the best suited for the purpose.

1. *Boracic Solution.*—This solution contains three or four per cent. of a mixture of two parts of boracic acid and one part of borax. An extract of the stomach or of the pancreas made with this solution keeps perfectly, and has little taste and no smell. For experimental purposes this extract is, I believe, all that can be desired—it is neutral in reaction and is chemically inert. It answers well also for administration by the mouth when the dose does not exceed one or two teaspoonfuls. But when larger quantities are required for the preparation of artificially digested food, and when food thus prepared has to be used day after day in quantity sufficient to sustain nutrition, larger quantities of boracic acid and borax are taken into the stomach than that organ can always comfortably tolerate.

2. *Dilute Spirit.*—The second solution is water mixed with twelve or fifteen per cent. of rectified spirit. This solution makes a most excellent extracting medium, and the quantity of spirit in it is so small as rarely to be an objection to its use. In the preparation of artificially digested food a final boiling is usually requisite, and in this final boiling the alcohol is dissipated. On the whole, this is perhaps the most generally useful of the three solutions.

3. *Chloroform Water.*—Chloroform dissolves in water in the proportion of about one in two hundred—these are the proportions employed in the preparation of the *aqua chloroformi* of the British Pharmacopœia. This forms a perfect solvent for the digestive ferments, and its keeping qualities are unrivalled. But though the quantity of chloroform dissolved is so minute (about two and a half drops in a fluid ounce) it communicates a somewhat powerful smell and taste to the solution. This taste and smell are agreeable to most persons, but not to all. It is, however, quite easy to get rid of the chloroform. If the dose to be used be first poured into a wineglass or saucer, and left exposed to the air for three or four hours, the chloroform passes off almost entirely in vapour, and leaves behind a simple aqueous solution of the ferments. Or, if the solution is employed for the preparation of artificially digested food, the chloroform being very volatile, disappears in the final boiling. It is perhaps well to mention that chloroform water has the property of reducing Fehling's solution, and that this property has to be taken into account in making experiments on digestion which involve testing for sugar.

Alimentary substances fall naturally into three well-marked groups, namely, *Carbohydrates*, *Proteids*, and *Fats*. I propose to consider the digestion of the three groups in the order here indicated. I have, however, no intention of dealing systematically with these subjects, but rather to take up certain points and questions in regard to which I have myself made observations, or which have a bearing on the preparation of artificially digested food and its administration to patients. I shall treat the digestive transformation of starch in some detail, because this has been worked out almost to completeness, and because it probably furnishes a type which will hereafter be of service as a guide to the study of the more complex problem of the digestion of proteids.

Diastatic Ferments—Digestion of Starch.

The importance of starch as an article of human food has, perhaps, scarcely been duly recognised. If we regard the enormous proportion in which the seeds of cereals and leguminous plants and the tuber of the potato enter into our dietary, and the immense percentage of starch in these articles, it is probably not too much to say that fully two thirds of the food of mankind consists of starch.

In the raw state, starch is to man an almost indigestible substance; but when previously subjected to the operation of cooking it is digested with great facility.

Diastase has only a feeble action on the unbroken starch granule, even at the temperature of the body. In the lower animals, and in germinating seeds the starch granule is probably attacked in the first instance by some other solvent, which penetrates its outer membranes, and thus enables the diastase to reach and act on the starchy matter contained within. By the aid of heat and moisture in the process of cooking, the starch granule is much more effectively broken up. Its contents swell out enormously by imbibition of water, and the whole is converted, more or less completely, into a paste or jelly or mucilaginous gruel. It is in this gelatinous form exclusively, or almost exclusively, that starch is presented for digestion to man.

The digestion of starch is accomplished by the saliva and pancreatic juice, both of which are rich in diastase. Diastase also exists abundantly in the liver, and in smaller quantities in the intestinal juice, in the blood, the urine, and apparently in all the interstitial juices. Diastase from all these diverse sources appears to act substantially in the same manner on starch, changing it by a progressive hydrolysis into sugar and dextrine.

If the action of a fluid containing diastase—say saliva or extract of pancreas—on starch paste be watched, the first effect observed is the liquefaction of the paste and the production of a diffluent solution. This change is effected with great celerity—in two or three minutes the stiff paste becomes a watery liquid. This is evidently a distinct act, and antecedent to the saccharifying process which follows. By operating with small proportions of diastase and large proportions of pure starch paste it is possible to hit on a moment when liquefaction is complete and saccharification is not yet begun. At this moment the solution yields a pure starch reaction, and no reaction of dextrine nor of sugar. The process of saccharification follows immediately on the heels of liquefaction; and in ordinary manipulations the one process runs into the other.

The speed of the action depends primarily on the proportion of the diastase. By adjusting the proportions of diastase and starch in such degrees that saccharification will be completed in about a couple of hours, the successive steps of the process can be leisurely followed by applying from time to time the appropriate tests.

If you test as soon as liquefaction is complete you get a pure blue with iodine and a slight reaction of sugar with Fehling's solution. In a few minutes the sugar reaction becomes more decided; and, although you still get a pure

blue with iodine in the ordinary way of testing, you will get, by greatly diluting the blue solution and then adding more iodine, a deep violet tint—showing the presence of erythro-dextrine mixed with starch. The next step is the total disappearance of the blue reaction with iodine, and the substitution for it of an intense reddish-brown colouration of erythro-dextrine. By-and-by the reddish-brown colour is replaced by a yellowish-brown—indicating the preponderating presence of a different kind of erythro-dextrine. Meanwhile the sugar reaction goes on increasing. The next step is the entire disappearance of any kind of colouration with iodine. But the action is still very far from complete—the proportion of sugar goes on increasing for a considerable time after iodine has ceased to tint the solution. At length, however, matters come to a standstill, and the proportion of sugar ceases to increase.

The explanation of this series of reactions is impossible on the old view of the constitution of starch. Until recently it was supposed that the starch molecule was represented by the comparatively simple formula $C_{12}H_{20}O_{10}$, and that under the influence of diastase this molecule was resolved by hydration into two molecules—one of dextrine, and one of grape-sugar.

The researches of Musculus and O'Sullivan(a) have shown that this is not a correct account of the transformation. In the first place it was found that the sugar produced was not grape-sugar (dextrose), but another kind of sugar called *maltose*. It was also found that the dextrines first produced, and which were coloured red or brown by iodine, were progressively changed, with simultaneous production of sugar, into a series of dextrines of a lower type which did not yield any colouration with iodine. To these latter kinds of dextrine the term achroo-dextrines has been applied.

As maltose is now ascertained to be the kind of sugar which is mainly produced in the digestion of starch by diastase, this body assumes a new and considerable importance in physiological chemistry, and it will not be out of place here to give some description of its properties. Maltose is a fermentescible, crystalline sugar of the saccharose (cane-sugar) class, having very little sweetening power, and possessing one atom less water than grape-sugar. Its formula is $C_{12}H_{22}O_{11}$. It possesses more rotatory power on polarised light than grape-sugar, but has considerably less power of reducing cupric oxide. The rotatory power of maltose is + 150, that of grape-sugar + 58. The reducing power of maltose is 61, compared to that of grape-sugar as 100. Maltose can be hydrolysed into grape-sugar by prolonged boiling with dilute acids. Malt-diastase does not possess this power, but we shall presently see that he diastatic ferments of the small intestine are able slowly to effect the same change.

The researches of Musculus and O'Sullivan have rendered it necessary to assume that the molecule of soluble or liquefied starch is a composite molecule, containing several members of the group $C_{12}H_{20}O_{10}$—which is to be regarded as the constituent radical of the composite starch molecule. The starch molecule must in the future be represented by the formula $n(C_{12}H_{20}O_{10})$—the value of n not being yet definitely agreed upon.

Two able chemists of Burton-on-Trent, H. T. Brown and J. Heron, have extended these researches, and fully confirmed the main conclusions of Musculus and O'Sullivan. In a recent publication (*Jour. Chem. Soc.*, September, 1879) they have for the first time presented a fairly complete scheme of the succession of changes undergone by starch under the action of diastase. These chemists assume that the molecule of soluble starch consists of ten members of the group $C_{12}H_{20}O_{10}$, and that its formula should be written $10\,(C_{12}H_{20}O_{10})$. This view greatly facilitates the comprehension of the progressive hydrolysis of starch by diastase.

We have seen that starch in the condition of paste or jelly is distinguished sharply by its physical properties from liquefied or soluble starch. There must therefore, in all probability, be some difference of molecular aggregation between starch in these two states; and it will not be a very bold assumption to suppose that starch in the gelatinous state consists of still more complex molecules than soluble starch, and that several molecules of soluble starch are grouped together to form the molecule of starch in the gelatinous state.

On the ground of these assumptions we may represent the successive steps of the digestion of gelatinous starch by the following series of equations.

The molecule of gelatinous starch $= n(C_{12}H_{20}O_{10})$ is first resolved into n molecules of soluble starch. The molecule of soluble starch is then resolved by progressive deduplication and hydration into dextrine and maltose by the following succession of steps:—

One molecule of soluble starch $= \overbrace{10(C_{12}H_{20}O_{10})}^{\alpha} + 8(H_2O) =$

1. Erythro-dextrine α $\overbrace{9(C_{12}H_{20}O_{10}) + (C_{12}H_{22}O_{11})}^{\alpha}$ maltose.
2. Erythro-dextrine β $8(C_{12}H_{20}O_{10}) + 2(C_{12}H_{22}O_{11})$,,
3. Achroo-dextrine α $7(C_{12}H_{20}O_{10}) + 3(C_{12}H_{22}O_{11})$,,
4. Achroo-dextrine β $6(C_{12}H_{20}O_{10}) + 4(C_{12}H_{22}O_{11})$,,
5. Achroo-dextrine γ $5(C_{12}H_{20}O_{10}) + 5(C_{12}H_{22}O_{11})$,,
6. Achroo-dextrine δ $4(C_{12}H_{20}O_{10}) + 6(C_{12}H_{22}O_{11})$,,
7. Achroo-dextrine ϵ $3(C_{12}H_{20}O_{10}) + 7(C_{12}H_{22}O_{11})$,,
8. Achroo-dextrine θ $2(C_{12}H_{20}O_{10}) + 8(C_{12}H_{22}O_{11})$,,

The final result of the transformation is represented by the equation—

$$\underset{\text{Soluble starch.}}{10(C_{12}H_{20}O_{10})} + \underset{\text{Water.}}{8H_2O} = \underset{\text{Maltose.}}{8(C_{12}H_{22}O_{11})} + \underset{\text{Achroo-dextrine.}}{2(C_{12}H_{20}O_{10})}.$$

We must conceive that the energy of the ferment is exercised in gradually pulling asunder the component groups or radicals of the unstable molecule of soluble starch—detaching one after another from the parent molecule—each radical as soon as detached assuming an atom of water and becoming an atom of maltose. At each detachment the parent molecule draws its remaining groups together to form a new kind of dextrine. As the process goes on the dextrine molecule becomes smaller and smaller—that is, contains fewer and fewer component radicals—the higher dextrines giving a red or brown colouration with iodine, but the lower dextrines giving no reaction with iodine.

It is to be noted that after the transformation has reached its final term there still remains a portion of achroo-dextrine unconverted into maltose. Upon this remnant diastase has only a very slow action. The percentage result, when the reaction is completed, gives in round numbers eighty parts of maltose and twenty parts of achroo-dextrine. The eight varieties of dextrine indicated in the above table of equations have not all been obtained in the separate state, but there is strong evidence of the existence of at least several of them as distinct bodies.

The account just given of the transformation of starch has been deduced from a study of the action of diastase derived from malt. The question arises—physiologically an important question—whether the action of salivary and pancreatic diastase is identical with that of malt-diastase. The researches of Musculus and V. Mering(b) give an affirmative answer to this question. These observers found that saliva and pancreatic extract act on starch paste in the same way as malt-diastase, the final products in all cases being achroo-dextrine and maltose, and not dextrose (grape-sugar). At my suggestion Mr. H. T. Brown was good enough to submit the question to a fresh examination in regard to pancreatic extract. His results fully confirm the conclusions of Musculus and V. Meering. He found, however, that there was a slight difference in the results when the action of pancreatic extract and malt-diastase on starch were continued a long time. The pancreatic ferment, in addition to the power, which it shares with malt-diastase, of slowly converting the lowest achroo-dextrine into maltose, exhibited a power of slowly changing maltose into dextrose (grape-sugar), which is not possessed in any degree by malt-diastase. Mr. Brown also informs me that there is in the small intestine a ferment which possesses similar properties.

The Respective Shares of Saliva and Pancreatic Juice in the Digestion of Starch.

The respective shares of saliva and pancreatic juice in the digestion of our farinaceous food is probably variable, and perhaps not quite identical.

As all our farinaceous food is eaten after being cooked, the starch in it is more or less completely gelatinised; it is, therefore, probable that one of the chief uses of salivary diastase in man is to liquefy starch jelly. A very brief contact suffices for this, and it is manifest that the accomplish-

(a) O'Sullivan's papers are published in the *Journal of the Chemical Society*, from 1872 to 1876. A full account of these researches is given in a paper in the same journal for September, 1879, by T. H. Brown and J. Heron.

(b) "Maly's Jahresbericht für Thier-Chemie" for 1878, page 40.

ment of this change is an important advantage in the subsequent operations in the stomach. Our gruels, blancmanges, puddings, and similar farinaceous dishes owe their thick pasty condition to starch in the gelatinous state, and nothing can be imagined more resistent to the rapid permeation of the meal by the gastric juice, and to the pulping of it into a uniform chyme, than the presence of coherent masses of starch paste. If the saliva performed no other service than this it would furnish an important aid to digestion of a meal.

There has been considerable dispute as to whether, and how far, the saccharification of starch goes on in the stomach. My observations lead to the conclusion that this depends on the degree of acidity of the contents of the stomach; and it is known that this varies within very wide limits. When a meal is swallowed it takes some time for the gastric juice to permeate the mass, and the acidity of the gastric contents is for some time very feeble. As digestion proceeds the contents of the stomach tend to become more and more acid. This is a point which each one can observe for himself. The stomach is by no means reticent of its doings. The posseting which we see in infants goes on in a less degree in the adult; and we are perforce made aware, sometimes inconveniently so, by our palates, of the ascending scale of acidity in the stomach. Saliva acts energetically in neutral and in slightly acid media, but its activity is checked, and finally arrested, when the acidity becomes pronounced. When digestion is proceeding comfortably and normally a certain interval elapses before the acidity of the stomach becomes considerable, and during this interval the salivary diastase continues active, and has time to accomplish a good deal of work. But we must remember that our farinaceous food is, for the most part, not in the most favourable condition for rapid digestion. It is not generally in a state of mucilage, but in the form of a solid paste, as in bread, puddings, and pastry. A good deal of it, too, is imperfectly cooked. Consequently, the larger part of our starchy food reaches the duodenum still unchanged, or only partially changed, and this larger part of the work is consummated by the pancreatic juice in the alkaline medium of the small intestine. I shall have to return to this point in speaking of gastric digestion.

It has been noted as curious that the saliva of man possesses more diastatic power than that of almost any other animal. Among the herbivora, which are such large consumers of starch, the saliva has comparatively little diastatic power; and in some, as in the horse, it is almost or altogether wanting. I apprehend that this is due to the fact that man alone has learnt to cook his starchy food, and that the diastatic power of his saliva has become developed with the opportunity for its exercise. Diastatic power would be thrown away in the saliva of the horse, because he eats his food in the raw or uncooked state, and saliva is without action on raw starch.

When can Starch be said to be Fully Digested?

Seeing that in the digestion of starch a number of intermediate products are evolved, the question arises, When can the digestion of starch be said to be accomplished? Is maltose the only product absorbed, or are not the dextrines, especially the achroo-dextrines, also absorbed? The dextrines, even those coloured by iodine, are highly diffusible, and pass freely through parchment-paper in dialysis. In this respect they contrast strongly with starch jelly, and even with liquefied (or soluble) starch, both of which are undialysable. It seems not improbable that the lower dextrines are largely absorbed. Because if we follow the history of starch after it has been transformed by digestion, and absorbed, we are confronted with the remarkable fact that after absorption the products of starch digestion, or at least a large portion of them, undergo a re-conversion in the liver into a substance closely resembing undigested starch. Glycogen, in its essential features, is an exact counterpart of soluble starch. It forms an opalescent solution in water; it is undialysable, and it is transformed by diastase into dextrine and maltose.

It appears reasonable to suppose that it would be an advantage to the economy if that portion of our starchy food which is destined to be stocked in the liver as glycogen, should be absorbed at an early period of the digestion, because the less removed the digested product is from starch at the moment of absorption, the fewer steps it will have to retrace in recovering the amylaceous state after absorption.

It is not necessary to suppose that the ascending steps of the re-conversion are identical with the descending steps of digestion, but it is probable that they are fundamentally alike, seeing the close similarity of the products at the two ends of the journey. At any rate there is no warrant in the present state of knowledge for the opinion that sugar is the only absorbable product of starch digestion.

Absolute Energy of Diastase.

The notion that the energy of diastase is not consumed in action seems, on *à priori* grounds, to be quite untenable—such a notion contravenes a general principle in physics, that energy in performing work is expended and finally exhausted. It is easy to show experimentally that diastase is no exception to this rule. Payen and Persoz estimated that malt-diastase was able to convert two thousand times its weight of starch into sugar. My own experiments with extract of pancreas indicated a much higher power than this. The following experiment illustrates at the same time the enormous diastatic power of pancreatic diastase and the fact that this power is strictly limited.

A quantity of starch mucilage was prepared, containing 1 per cent. of pure potato starch—100 cubic centimeters of this mucilage contained exactly one gram of dry starch. The pancreatic extract employed was prepared in the following manner:—Fresh pig's pancreas, freed from fat, was rubbed up with an equal weight of fine sand until it became a smooth uniform pulp. This pulp was spread out very thinly on sheets of glass, and allowed to dry in the open air for a fortnight. It was then scraped off with a knife, and formed a rough shreddy sort of powder: 125 grams of this mixture of pancreas and sand were infused, at the temperature of the room, in 1000 cubic centimeters of saturated chloroform water, with a little more chloroform added to insure against decomposition. The mixture was allowed to stand for four days with occasional agitation, and the product was then filtered clear through paper. The extract of pancreas thus prepared proved a very serviceable preparation, and most of my observations on pancreatic digestion were made with it.

This extract was found to be so extremely active that it was necessary to dilute it largely in order to bring the quantities of starch operated on within due compass. Accordingly a dilution was made of one cubic centimeter of the extract in 1000 cubic centimeters of water. Five numbered phials were then severally charged with 100 cubic centimeters of the prepared starch mucilage—so that each phial contained exactly one gram of dry starch. One cubic centimeter of the diluted pancreatic extract was added to phial No. 1, two cubic centimeters to No. 2, four cubic centimeters to No. 3, six cubic centimeters to No. 4, and eight cubic centimeters of the same diluted extract to phial No. 5. The phials were then corked and placed in a warm chamber, where the temperature was steadily maintained by a Page's regulator at 100° Fahr. (38° C).

At the end of twenty hours the contents of the phials were examined. All of them were perfectly transparent, and had entirely lost the opalescent appearance of the original starch mucilage, and not a vestige of sediment existed in any of them. The following reactions indicated the progress of the transformation:—

No. 1 gave an intense blue colouration with iodine; and when the blue solution was largely diluted and more iodine added, it developed a violet tint which showed the presence of erythro-dextrine; it also reduced the cupra-potassic solution freely.

No. 2 gave a strong blue reaction with iodine, and by diluting and adding more iodine, the colour changed to a deep claret-red, indicative of abundance of erythro-dextrine. This and all the rest gave a strong sugar reaction with Fehling's solution.

No. 3 yielded no blue reaction with iodine, but an intense port-wine colouration of erythro-dextrine.

No. 4 gave no blue reaction with iodine, and only the faintest possible brown colouration with that reagent, showing only traces of erythro-dextrine.

No. 5 exhibited not a vestige of reaction with iodine. It contained neither starch nor erythro-dextrine, but it yielded a strong sugar reaction.

The transformation of No. 5 might be regarded as complete, but the rest still contained starch or erythro-dextrine, or both. Nos. 1, 2, 3, and 4 were restored to the warm chamber,

and re-examined at the expiration of seven hours. No. 4 no longer gave the slightest reaction with iodine; but Nos. 1, 2, and 3 showed only slight signs of further alteration, and were returned to the warm chamber.

At the end of forty-eight hours from the commencement of the experiment, Nos. 1, 2, and 3 were examined again.

No. 1 showed a strong blue colouration with iodine, and also a strong reaction of erythro-dextrine.

No. 2 no longer gave any blue tint with iodine, but it exhibited an intense erythro-dextrine reaction.

No. 3 only gave a yellowish-brown reaction with iodine of moderate intensity.

After a further sojourn in the warm chamber of seventy hours the contents of the three phials were not found to be sensibly altered; they gave exactly the same reactions as before. It was evident that in these phials the diastatic action had run its course to an end within the period of forty-eight hours, and that the solutions had then come to a state of rest—the ferment had liberated all its energy—the limits of its power had been reached—and the task allotted to it was left unfinished. Nevertheless it had accomplished an amount of work which, considering its infinitesimally minute mass, appears marvellous. We shall now endeavour to measure approximatively the amount of this work as indicated by the above experiments.

The original pancreatic extract, when evaporated to dryness in a water-bath, was found to leave a residue of 1·5 per cent. of organic matter. This organic matter included, besides diastase, a quantity of proteolytic ferment (trypsin) and a certain quantity of the milk-curdling ferment. It also included a certain quantity of digested proteid matter—for in making an extract of the pancreas there is always accomplished some self-digestion of the glandular tissue.

Taking into account these various admixtures, it would appear a very liberal allowance to estimate the diastatic ferment as amounting to one-fourth of the total organic matter. This would give us for the original extract a proportion of diastase in round numbers of 0·4 per cent., and for the diluted extract of 0·0004 per cent.

The proportion of diastase added to phial No. 4 seems to have hit off with precision the limit of quantity required to transform one gram (15·5 grains) of starch in forty-eight hours at a temperature of 100° F. (38° C.). The amount of diluted extract added to this phial was six cubic centimeters, and on the basis of the above estimate this represents a quantity of nett diastase amounting to 0·000024 gram. This yields us, by an easy calculation, the astounding result that pancreatic diastase is able to transform into sugar and dextrine no less than 40,000 times its own weight of starch!

The speed at which a given quantity of starch is transformed by diastase depends essentially on the proportion of ferment brought to act upon it. In the above experiments the proportion of diastase was very minute in comparison with the amount of starch, and the action went on slowly for forty-eight hours. But if we reverse these proportions and mix a small amount of starch with a large amount of diastase the transformation is instantaneously accomplished.

If a test-tube be half filled with an active extract of pancreas, and a few drops of starch mucilage be quickly shaken therewith, you cannot detect the reaction of starch or dextrine in the mixture, however prompt you may be with the testing—the transformation has followed on the admixture as instantaneously as the explosion of the charge follows the fall of the trigger. Between these extremes there are all gradations. This mode of action differs entirely from what is seen in the operation of ordinary chemical affinity. If you add a drop of acid to an excess of alkali, the acid is instantly neutralised and the action comes to an end; and conversely, if you add a drop of alkali to an excess of acid, the action is equally instantaneous: the affinity of the two bodies for each other is a mutual affinity. But this is not the case with the action of diastase on starch. The starch appears entirely passive in the process; all the energy is on the side of the diastase, and this energy can only be liberated gradually. There is something in this strikingly suggestive or reminiscent of the action of living organisms. To illustrate my meaning, let us compare the particles of the ferment to a band of living workmen whose function is to scatter little heaps of stones. If the heaps are few and the workmen many, all the heaps will be scattered at once, and the energy of the workmen will still remain sensibly unimpaired. But if the heaps are millions, and the workmen hundreds, and if the workmen are doomed to labour on until they fall exhausted at their task, the scattering of the heaps will go on for a comparatively long time, and the process of exhaustion will be a gradual one.

I may here mention that the diastatic ferment does not exist in the saliva and pancreatic juice of young suckling animals—except in minute proportions. Its quantity increases when the teeth are cut. In the human infant diastase does not appear to exist in sufficient abundance to digest starchy matters effectively until about the sixth or seventh month. Until this period it is therefore not advisable to administer farinaceous food to infants.

Digestion of Cane-sugar—Inversive Ferment.

Bernard(c) first called attention to the fact, already mentioned, that cane-sugar (saccharose) required digestion, both in animals and plants, before it could be utilised in nutrition. The cane-sugar stored up in beetroot and in the sugar-cane is changed by ferment-action into invert-sugar before it is permitted to circulate in the sap and take part in the nutritive operations of the plant. He found also that an analogous transformation was requisite before cane-sugar could be assimilated by animals. He states that when cane-sugar is injected into the blood it circulates therein as an inert body, and is in no degree used as nutriment by the tissues, but is, eventually, entirely removed unchanged with the urine. Cane-sugar is, however, an important article of food, and is consumed by us in large quantities every day. And we know that when thus consumed it does not behave like an inert matter, circulating awhile in the blood, and then being eliminated by the kidneys as a waste product. It is evidently absorbed and assimilated, and must, therefore, somewhere or other, be transformed or digested in animals as it is in plants. Reasoning this way, Bernard sought for an inversive ferment for cane-sugar in the alimentary tract; and after searching in the saliva, in the stomach, and in the pancreas in vain, he at length discovered it in the small intestine. In the small intestine he found that cane-sugar was transformed into invert-sugar, and by a similar ferment with that destined for analogous purposes in yeast, in beetroot, and in the sugar-cane.

The transformation of cane-sugar into invert-sugar is represented by a very simple equation:—

$$2C_{12}H_{22}O_{11} + 2H_2O = C_{12}H_{24}O_{12} + C_{12}H_{24}O_{12}$$

Saccharose. Water. Dextrose. Lævulose.

The inversive ferment was detected by Bernard in the small intestine of dogs, rabbits, birds, and frogs. Balbiani found it in the intestine of the silkworm. It was recognised by myself in an extract of the small intestine of the pig, the fowl, and the hare. It does not exist in the large intestine.

But although my observations on this subject coincided in the main with those of Bernard, I noted two points which I think merit further attention. The first was that while a piece of small intestine infused in water yielded a mixture which was capable of inverting cane-sugar, the same infusion when filtered through paper until it was perfectly clear had no such power. It seemed as if the inversive ferment did not pass freely, if at all, into true solution, but remained attached to some of the formed elements contained in the intestine. The second point I noted was the extreme slowness of the action. When cane-sugar was added to the unfiltered infusion of intestine, and the mixture maintained at blood-heat, it generally took a couple of hours before a reducing effect with the copper test could be obtained. Both these circumstances reminded one of the action of formed ferments, and I could not help thinking that there was here something which required clearing up at some future time.

Minto House Medical School.—At a meeting of the lecturers of this School, held recently, Mr. Geddes was unanimously elected to the vacant Lectureship on Natural History. Mr. Geddes was formerly Demonstrator of Physiology in University College, London, and more recently of Zoology in the University of Aberdeen. We understand that he has just returned from a zoological and palæontological expedition in Mexico, and that he has had considerable experience at the French, German, and Scottish zoological stations.

(c) Claude Bernard, "Leçons sur les Phénomènes de la Vie," tome ii., page 36. Paris, 1879.

CROONIAN LECTURES.

ON SOME POINTS IN THE PATHOLOGY AND TREATMENT OF TYPHOID FEVER.

Delivered at the Royal College of Physicians of London.

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Lecture II.

(*Concluded from page* 368.)

We have next to consider what is the relation which these different processes bear to one another, and to the symptoms of the disease. According to the views of many pathologists the phenomena of typhoid fever are produced in the following manner. The poison is swallowed, and enters the system through the lymph follicles of the ileum, on which it produces its primary effects; it then passes into the mesenteric glands, where it goes through a stage of latency or incubation, and at last enters the circulation and gets deposited in other lymphatic organs and the spleen, and causes a rapid hyperplasia of their cells, and so produces the characteristic local lesions. The poison also acts on the heat-regulating centres, and produces the febrile temperature. The high temperature in its turn causes all the other morbid phenomena—the albuminous infiltration and softening of the heart and other organs, the vitreous degeneration of the muscles, the acceleration of the circulation and respiration, the febrile consumption of the body, and especially the disturbances of the nervous system, the delirium and stupor of the typhoid condition.

The correctness or not of this view is, I need hardly say, of the utmost importance in the treatment of the disease. It is therefore very necessary that we should examine the arguments by which it is supported.

In the first place, it is urged that these phenomena occur in many febrile diseases which have nothing in common but the high temperature. Secondly, it is possible to produce many of them by artificially raising the temperature. Thus, the experiments of Dr. Wickham Legge show that by raising the temperature of animals to 112° Fahr. albuminous infiltration of the liver and other organs is produced. Max Schultze, by means of his microscopic warming apparatus, directly demonstrated the injurious effects of high temperatures on living cells. We have, too, distinct evidence that raising the temperature of the body increases metabolism. By means of a vapour-bath it is quite easy to raise the temperature many degrees, as the evaporation from the skin, and so the compensatory dispersion of heat, is prevented. Bartels found that sufficiently prolonged vapour-baths raised the temperature, accelerated the pulse and respiration, increased the discharge of urea 16 per cent., and diminished the weight of the body. It is interesting to observe that the discharge of urea was greater in the second twenty-four hours after the bath, when the temperature was again normal, than during the time the temperature was raised. This is analogous to the epicritical discharge of urea which takes place in those fevers which terminate by crisis. In both cases it is probably due to its partial retention and accumulation during the febrile period in consequence of the unfavourable conditions for its elimination during this time. Similar results were obtained by Naunyn in experimenting on dogs.

Lastly, in support of this view may be adduced the effects of treatment. If a patient in the typhoid state, *i.e.*, in a condition of delirium or stupor, with a dry, brown tongue, tremulous muscles, greatly accelerated pulse, and other symptoms which are liable to occur in severe fever, be placed in a cold bath and the temperature reduced to below 100°, a remarkable improvement usually takes place in his symptoms: the stupor passes off, the delirium ceases, the tongue becomes moister, the pulse less frequent, and commonly he falls into a quiet sleep; the symptoms recurring in the course of a few hours when the temperature has again risen to its former height. The effects of a cold bath in cases of hyperpyrexia, as in rheumatic fever, are still more striking, and are well known to all who have employed this mode of treatment. Hence there can be little doubt but that the pathological changes and injurious effects of fever are largely due to the high temperature. But, notwithstanding these and other arguments which may be adduced to show that almost all the phenomena of fever are due to the high temperature, other facts I think prove decisively that this view is only in part correct and that many of them may occur independently.

In the first place, there are strong reasons for believing that the increased metabolism, as shown by increase in the discharge of urea, is in part, at least, due to the direct action of the fever poison, and not solely to the high temperature. Thus, in the artificial septic fever of the lower animals produced by the injection of pyrogenetic substances, it is found that the increased excretion of urea precedes the rise of temperature. Dr. Ringer has shown that this also takes place in intermittent fever; and other observers have proved the same for relapsing fever. In typhoid fever we are unable to adduce similar proofs, as the attack cannot be predicted, but there can be no doubt but that the same law holds good in this fever also.

We have next to consider how far the albuminous infiltration and softening of the heart and other organs is solely caused by the temperature. Against this view it may be urged that these degenerations occur in conditions not attended by fever, as after severe burns, before any febrile reaction has had time to take place; the immediate effect of a burn, as of all stimulations of the sensory nerves, being to depress the temperature. A case has been recorded where death took place six hours after a burn affecting nearly the whole surface of the body, and on post-mortem examination the kidneys and heart were found in an extreme state of granular infiltration. These degenerations have, moreover, been met with in cases of typhoid fever where the temperature has been but little raised; so that on the whole we must conclude that they may be in part produced by the direct action of the poison, though it cannot be doubted but that a prolonged high temperature not only greatly conduces to them, but is capable itself of their production.

The vitreous degeneration of the striped muscles is probably entirely due to the high temperature.

The next question is how far the characteristic symptoms of fever are due to the temperature, especially the nerve symptoms, the restlessness, delirium, and stupor. I think we must answer that these symptoms, especially the delirium and stupor, are not necessarily dependent on the temperature, though they are largely influenced by it. Dr. Murchison regarded them as caused by the accumulation in the blood of the urea and other products of the disintegration of the albuminous tissues. The occurrence of cases of afebrile typhoid shows that they occur independently; and, moreover, we often see very high temperatures, as in relapsing fever, without any marked disturbance of the nervous system.

But although it seems clear from these examples that many of the phenomena of fever which are ascribed by Brand and Liebermeister solely to the temperature may occur independently, yet it is quite certain that the high temperature exercises a most injurious influence, inasmuch as it increases the frequency of the pulse and respiration, augments the metabolism of the albumen, and consequently the febrile consumption of the body, adds an additional factor to the albuminous infiltration and softening of the heart, muscles, and glandular organs, and injuriously affects the nervous system, both indirectly by favouring the accumulation in the blood of the products of the disintegration of the tissues, and directly, when it reaches a certain degree, by causing delirium, stupor, and coma.

Another point of great practical importance in the pathology of fever is the effect produced on the digestion. Usually, though not invariably, when the temperature rises above 102° Fahr. the appetite becomes very much impaired, and when the tongue becomes dry it is entirely lost; and it has generally been assumed, though on imperfect data, that a state of fever more or less completely stops the secretion of the gastric juice, and so arrests the digestive function. Modern observations, however, show that this is by no means always the case. Dr. Pavy, in this country, and Hoppe-Seyler, in Germany, have proved that an active digestive fluid can be prepared from the stomachs of animals in a state of fever. And Manassein has shown that though in dogs affected with septicæmic fever the natural digestive fluid, procured by introducing sponges into the stomach, had a much inferior power to that of healthy animals, neverthe-

less, if hydrochloric acid were added, then the digestive power was equal to that in health. Hence it is probable that the impaired digestion in fever is rather due to a diminished secretion of acid than of pepsine; and this perhaps explains the beneficial effects often seen to attend the administration of hydrochloric acid. The disinclination, and even complete inability, to take food are doubtless largely due to the partial or complete arrest of the secretion of the saliva, and the dryness of the mouth; and these symptoms, perhaps more than any others, are dependent on the temperature. No doubt in fever the stomach frequently rejects food, but the vomited matters are often a decisive proof that the gastric juice is still being secreted. How active the digestive power may be in typhoid is shown by a case where Dr. Heubner fed a patient on beef-steaks through a severe attack, without any injurious consequences. On the whole, I think we need not be deterred from giving fever cases sufficient food with proper precautions from fear that it is incapable of being assimilated.

But although in fever the gastric juice may be formed in sufficient quantity, there are strong reasons for believing that the secretion of the saliva and pancreatic fluid is greatly impaired: hence starchy foods are not digested so well as albuminous foods; and I am of opinion that any considerable quantity of starch, given in the form of arrowroot, corn-flour, and sago, is injurious, and tends to cause intestinal irritation.

I now propose to consider some of the phenomena peculiar to typhoid, among the most important of which are the type and duration of the fever.

The latter appears at first sight to be extremely irregular, and to differ remarkably from the much more regular course of the other zymotic diseases. The causes of this irregularity are in the main two. First, we have in an ordinary attack of typhoid two distinct fevers—a primary, due to the infection of the system by the typhoid poison; and a secondary, caused by gangrene and ulceration of the intestine, and consequent septicæmia. The first of these two processes has, I believe, as definite a course as the other zymotic fevers; the second or septicæmic fever is much more irregular.

The second cause is the frequency of relapses.

The fact that we have in typhoid two forms of fever to deal with is of considerable importance, both in the pathology and treatment of the disease, and it is one which I think is sometimes neglected.

Many other fevers of course present an exact analogy in this respect to typhoid; thus in small-pox we have a primary fever caused by the direct action of the small-pox poison, lasting usually about three days, then a period of remission, which is followed by a septicæmic fever due to suppuration. In scarlatina we have in uncomplicated cases a primary fever, lasting five or six days, but where there is ulceration of the fauces or implication of the glands a septicæmic fever of indefinite duration, which usually comes on before the primary fever has subsided, but sometimes after a period of remission. In typhus there is usually no secondary fever, and the primary fever subsides by crisis about the fourteenth day. Now, typhoid resembles typhus in the long duration of the primary fever, and scarlatina in the fact that the secondary or septicæmic fever supervenes before the subsidence of the primary, the two processes overlapping, so that there is no intervening remission. The change, however, shows itself by an alteration in the type of the fever, which, from being continuous in character with only slight diurnal fluctuations, becomes remittent with marked diurnal variations. This is at once seen on the temperature chart of a case of typhoid where the fever has been allowed to run its course unchecked. This change in the type of the fever usually takes place during the third week, sometimes even as early as the fourteenth day. Generally it is a gradual change, but not unfrequently it takes place very suddenly, and at the same time there is a perturbation of temperature—often an evening rise exceeding that of the previous days, and followed by a considerable morning fall. This resembles the critical perturbations of those fevers which terminate by crisis, and probably indicates a kind of crisis of the primary fever. Not unfrequently profuse perspirations now appear, and an eruption of sudamina; while in the majority of cases the roseola of typhoid ceases to appear after the middle of the third week.

The phenomena of the disease are now made up of three factors—first, the local lesions; secondly, the septicæmia; thirdly, the high temperature. Sometimes one of these predominates, sometimes another.

The great resemblance which other forms of internal gangrene may bear to the later stages of typhoid fever was strongly impressed upon me by a case of gangrene of the lung which was under my care in the Middlesex Hospital in 1876. The patient was delirious, very prostrate, with a dry tongue, diarrhœa, great enlargement of the spleen, a temperature varying from 105° to 101°, sordes on the teeth, and well marked *tâche*. There were the physical signs of capillary bronchitis of both lungs posteriorly, with patches of bronchial breathing. These signs were attributed to hypostatic congestion and lobular pneumonia. In this case all the signs of typhoid fever except the roseola were well marked, and for some days the diagnosis from this disease could not be made. The case was ultimately regarded as one of acute tuberculosis. After death several circumscribed patches of gangrene was found in both lungs, evidently caused by embolisms blocking branches of the pulmonary artery, these embolisms being derived from thrombi of the prostatic veins. The ordinary signs of pulmonary gangrene—fœtor of the breath, and expectoration—were absent throughout the whole course of the disease.

This question has some bearing upon treatment. And first with regard to the use of alcoholic stimulants during the first stage of the disease, when the patient is suffering from the effects of the specific typhoid poison, some difference of opinion prevails as to the advantage of stimulants. Some authorities are of opinion that alcoholic stimulants in all severe febrile diseases have a beneficial effect by serving as a kind of food, and diminishing the febrile consumption of the tissues, and so tending to counteract the degeneration and consequent failure of the heart and central nervous system. Others, again, disbelieve in these effects, and only administer alcohol as a true stimulant when the heart actually begins to fail. But in the later stages of the disease, when we have to deal with a septicæmia due to gangrene and ulceration, if we follow the established principles of surgery, we can have no doubt as to the utility of alcohol. I believe all surgeons, without exception, treat external gangrene, accompanied by symptoms of septicæmia and depression, by free stimulation; and the fact that the gangrene is internal, instead of external, cannot make any difference in the treatment.

So, too, with regard to the use of certain drugs, especially opium. Some physicians regard opium as contra-indicated, on the ground that it produces constipation, and so tends to retain the decomposing fæces in the intestinal canal. Others, on the contrary, regard it as beneficial by checking the peristaltic movements, and so favouring the healing of the ulcers, and diminishing the risk of perforation. But, apart from its local action on the intestinal canal, it is evident that, according to the principles of surgery, its use in the second stage of typhoid fever is often indicated. External gangrene and phagedæna are unquestionably benefited by opium, which renders the system more tolerant of their injurious effects; and there can be no reason for treating internal gangrene on different principles.

The duration of the primary fever due to the direct action of the typhoid poison is probably between two and three weeks, occasionally about fourteen days—*i.e.*, the same length as typhus,—but most commonly a few days longer. This is shown by the perturbations of temperature not unfrequently occurring at this time, and by the change of type of the fever from a continuous to a remittent form. Moreover, not unfrequently we see cases of what are known as abortive typhoid, in which the early stages of the fever are severe, the temperature very high, the onset sudden, and the febrile condition strongly marked; then about the fourteenth day defervescence rapidly takes place. The explanation of these cases is, no doubt, that though the poison has powerfully acted on the general system, for some reason or another—possibly some idiosyncrasy on the part of the patient—the local intestinal lesions have been slight, the infiltration of the glands only moderate, and the deposit has become absorbed instead of sloughing. These cases are exactly analogous to a very common form of modified small-pox, in which we have the primary fever due to the effect of the small-pox poison on the system of great severity, but in consequence of the slight local affection of the skin the secondary or suppurative fever is absent.

In typhoid, as in small-pox, the intensity of the primary

fever is not always a certain indication of the amount of the local mischief and consequent severity of the secondary fever; and, as in these abortive cases, the former may be severe and the latter slight, though usually a severe primary fever is accompanied by extensive infiltration and subsequent sloughing of the intestinal glands. The converse condition is much more common, in which we have a slight primary fever and mild constitutional symptoms early in the disease, with very severe intestinal lesions and consequent gravity of the later stages. Hence the well-known difficulty of forming a correct prognosis in the early stages of the disease, and the importance of treating the milder cases with the same precautions as the severe ones.

There can, I think, be little doubt but that cases of typhoid which are from time to time described as having been cut short by special remedies—as by emetics or calomel—are really of this character, the observer ascribing to the remedy what is, in fact, one of the natural phenomena of the disease.

Another point of interest in the history of typhoid fever is the mode in which defervescence takes place. In most of the zymotic fevers defervescence takes place either by crisis or a very rapid lysis. Thus, typhus, relapsing fever, uncomplicated measles, the primary fever of small-pox, usually terminate by crisis; scarlatina, when uncomplicated, usually by a rapid lysis. Crisis, therefore, or rapid lysis would seem to be the natural mode in which zymotic fevers terminate. Typhoid presents an apparent exception to this rule. But here too I think we have indications that the primary fever tends to terminate in the same way; and the usual prolonged lysis is a phenomenon of the secondary or septicæmic fever. This is indicated by the perturbation of temperature so often present about the middle of the third week, and the rapid defervescence of the abortive cases.

The second cause of the variable duration of typhoid fever is the frequent occurrence of relapses. Now, relapses in typhoid take place much oftener than is usually supposed. They may occur at any time to as late as three or four weeks after complete defervescence, the longest apyretic interval being, I believe, thirty-one days. Most commonly it varies from one or two to fourteen or fifteen days. The frequency with which these relapses occur after an apyretic interval has been very variously estimated. At the London Fever Hospital, during a period of seven years, they occurred in about 3 per cent. of the cases; in the hospital at Basle, 8·6 per cent. Other authorities give numbers varying from 1·4 to 11 per cent. This great difference depends, perhaps, in part on a different estimation of what constitutes a relapse; but there can, I think, be no doubt but that the frequency of relapses is much influenced by treatment. If the fever is allowed to run its course unchecked, relapses are much less frequent than when the temperature is systematically kept down by cold baths and antipyretic medicines. Thus, at Basle, under the expectant treatment, about 8·6 per cent. of the cases relapsed. Since the introduction of the treatment by cold bathing this proportion has been nearly doubled. About 10 per cent. of the cases treated by me in the same manner have relapsed.

It is of course necessary to distinguish between a true and a false relapse. In typhoid fever, long after defervescence has taken place, the temperature remains labile, and the vaso-motor system very unstable, as shown by the continuance of the *tâche*. I have long looked on the persistence of this latter phenomenon as a valuable guide and as indicating that the intestinal ulcers have not yet healed, and that therefore the patient is still liable to the sequelæ of the disease. As long as the patient continues in this condition of labile temperature and instability of the vaso-motor system, very slight causes, as errors of diet—nay, the mere resumption of solid food,—mental emotions, slight exertion, will send up the temperature; so any extension of the local mischief will cause a fresh febrile paroxysm. These cases must be distinguished from true relapses, where there is a fresh infection of the blood with the typhoid poison, fresh deposit in the glands, and commonly a fresh eruption of the roseola.

But besides these relapses which take place after a distinct apyretic interval, and about which there can be no question, it is very common for the relapse to take place much earlier, during the secondary or septicæmic fever. These early relapses are often called recrudescences, to distinguish them from the later ones; but there can, I think, be no doubt but that they are of exactly the same nature. They are indicated by an exacerbation of the fever, and usually by the appearance of a fresh crop of rose spots, which commonly cease to come out after the middle of the third week. It is well known that the later relapses may be repeated twice, or even thrice; and the same thing also occurs with the earlier ones or recrudescences. Hence we may have an attack of typhoid of an indefinite duration without any distinct remission.

The most prolonged case which has come under my own notice was one in which the temperature was maintained at febrile heights without any distinct intermission for nearly eighty days. The patient was a gentleman of middle age, who had a very severe attack with prolonged delirium and great prostration, and in the third week pretty free intestinal hæmorrhage; he then had pneumonia of the right base, which did not clear up for several weeks; then there was a distinct relapse, with a recurrence of the hæmorrhage. This was succeeded by thrombosis of the veins of the lower extremities, on which some serious cardiac lesion supervened, the nature of which was not quite clear, but which I attributed to thrombosis of the right cavities. This caused alarming dyspnœa and a tendency to syncope, and was followed by general dropsy which lasted many months, but the temperature became normal about the eightieth day, and did not again rise. This patient ultimately recovered, but he could be considered as convalescent for nearly twelve months; and when I saw him two years later there were still some indications of obstruction to the return of blood from the head and upper extremities.

We may then, I think, regard those cases in which the fever lasts for many weeks without intermission as due to early relapse or recrudescence.

We have now to consider the pathology and causation of these relapses. There can, I think, be little doubt but that in relapse there is a fresh infection of the blood by the typhoid poison; and the opinion has been entertained that this takes place from without, either from emanations from other cases in hospital practice, or from the patient's own dejections where cleanliness is neglected or the sanitary conditions are defective. Relapses, however, not unfrequently occur among isolated cases, and where every sanitary precaution has been strictly observed. Hence there can be little doubt that the re-infection is usually an internal one, though an external infection is of course quite conceivable.

The opinion is widely prevalent that relapses may be caused by errors of diet, and doubtless they often follow such errors; but I believe this to be an accidental coincidence. In the first place, relapses or recrudescences are very common before the fever has subsided and the appetite returned; secondly, they occur later in cases where it is quite certain that the proper regimen has been strictly observed; lastly, errors of diet during convalescence from typhoid are, I believe, the rule, and not the exception,—certainly this is the case among the uneducated classes, who are seldom willing to put any restraint upon their appetites. Even in hospital practice, where care is taken to exclude improper articles of food, everyone must be aware how often this regulation is evaded, and all kinds of indigestible viands are smuggled in. When the poor are treated at their own homes, as a rule, directly the appetite returns they begin to gratify it with whatever most takes their fancy; yet it is very doubtful whether relapses are more frequent under these circumstances.

Some time ago I had under my care in Middlesex Hospital a boy about fourteen years of age, who passed through a very severe attack of typhoid, and whose appetite returned before the temperature became normal. He continued of course to be restricted to liquid food. He complained to his mother, who remonstrated with me. I endeavoured to explain to her the danger of beginning solid food too soon. She replied that she would rather see her boy die of fever than of starvation. She accordingly took him home, stuffed him with solid food, and he recovered rapidly—much sooner, I have no doubt, than if he had remained in the hospital on a restricted diet.

In fact, these errors of diet, *i.e.*, the early resumption of solid food, is in most cases beneficial. After an attack of typhoid a large amount of tissue has to be built up. The return of the appetite shows that the digestive and assimilating powers are again active; and the more food the patient eats, the sooner will this be effected. Hence by continuing to restrict the diet we retard convalescence. We are

of course unable to act upon this view, as we know that in a certain number of cases the intestinal ulcers are in such a state that the passage over them of any irritating particles might easily produce an extension of the ulceration, and so cause perforation; and as we have no certain means of distinguishing between those cases where the ulcers are granulating and not likely to be injuriously affected by solid food, and those where they are in an irritable or an atonic state, we are compelled to restrict the diet of all cases for a time, the evil of somewhat retarding convalescence being of trifling importance when compared with the risk of causing perforation.

I believe, then, that errors of diet, though they may cause a spurious relapse by increasing the local mischief, are incapable of re-infecting the blood with the typhoid poison, and so producing a true relapse.

Assuming the cause of the relapse to be the re-infection of the blood by a fresh absorption of the typhoid poison, there is every reason to believe that this takes place from the mesenteric glands and the glands of the ilcum, in which there can be little doubt but that the poisou is deposited. This re-absorption probably takes place in all cases, but generally the system is protected by having just gone through an attack. In some cases, however, it is probable that the zymotic process has uot been complete, and then a relapse takes place; and it is remarkable that, when the fever is prevented from running its usual course by persistently reducing the temperature, the frequency of relapses is nearly doubled.

In scarlatina we have an exact parallel to the relapses of typhoid, though they occur much less frequently. During the past year four cases of relapse in scarlatina occurred in the London Fever Hospital at varying times from five or six days to a fortnight from the commencement of the primary attack, sometimes after an apyretic interval, sometimes before defervescence had taken place; and, as occasionally takes place in typhoid, the second rash has been more intense than the primary. As in typhoid, it is of course necessary to distinguish these true relapses with a recurrence of the eruption from the very frequent spurious relapses due to absorption of septic poisons from the throat or glands. In scarlatina, as in typhoid, there is very commonly infiltration of the lymphatic glands, and in all probability the relapse here also is due to re-absorption of the poison contained in them.

Syphilis also presents a close analogy. Here also we have reason to believe that the poison remains deposited in the lymphatic glands, and relapses are due to re-absorption from these; the great difference from the acute infectious fevers consisting in the fact that in syphilis the glands remain chronically enlarged, and hence relapses may occur after long intervals, whereas in typhoid and scarlatina the process runs a rapid course, and after the lapse of a few weeks the glands return to their normal condition, and the poison is entirely eliminated from the system. In those fevers, as typhus, where there is no affection of the glands, relapses are hardly ever met with.

Taxing Doctors.—Some persons are making a strong effort in Washington to pass a Bill compelling doctors to pay $50 per annum for the privilege of practising medicine. This seems very like putting on the last straw. The doctor now attends to all the city poor gratuitously, furnishing his services at the hospitals and dispensaries. This would cost the city thousands of dollars if properly paid for, as is every other thing furnished to paupers, from butcher's meat to religious consolation. He is obliged to fill out, gratuitously, birth certificates and death certificates, both of which imply extra labour and special knowledge. He is expected to serve, without pay, on all kinds of medical boards, health boards, and charitable boards. Indeed, his advice and help are wrested from him, with no return, on every occasion possible. The fact that all these services are contributed willingly does not destroy the obligations they confer, nor justify governmental authority in putting a heavy annual tax on him for his labours.—*New York Med. Record*, Feb. 21. [This is one of the things which they do *not* manage better in France. Every practitioner there has to pay a heavy annual licensing fee, and if he pursues his profession in more places than one, as at a watering-place in the summer, he has to pay for the licence over again.]

ORIGINAL COMMUNICATIONS.

THE HISTOLOGY OF GRANULAR KIDNEY.(a)

By ROBERT SAUNDBY, M.D., M.R.C.P.,
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In opening the discussion this evening on the Histology of Granular Kidney, it is perhaps unnecessary to recapitulate all the views and modifications of views that have been held at different times on this subject, but it will suffice if I state what are the opinions now held, before introducing the descriptions of the changes demonstrated in the preparations and drawings which I have laid before you. There are at the present time three well-defined doctrines; and if we take these in their historical order, the first is that of Dr. George Johnson, who regards the lesion as "chronic desquamative" inflammation of the renal epithelium. According to this observer, the resulting atrophied organ is composed not of newly formed connective tissue, but of the wasted remains of the tubes; the vessels are thickened mainly by a "physiological hypertrophy" of their muscular coats. The second doctrine is that of Traube. This places the chronic inflammation in the stroma, which increases in amount; the changes in the tubes are regarded as passive and secondary; the capsules of the Malpighian bodies share in this hyperplasia of the fibrous elements; the thickening of the vessels is admitted, but regarded, at least by the modern exponents of the doctrine, as a participation by the fibrous coats of the bloodvessels in the inflammatory process. The third view is that of Sir William Gull and Dr. Sutton; they describe the condition as being due to the "deposit" of a "hyalin" or "hyalin-fibroid" material in the intertubular parts of the kidney, leading to atrophy of the intratubular structures. The thickeuing of the vessels is due to this deposit of hyalin-fibroid material in the intima and adveutitia, the muscularis being atrophied. All these views have served to introduce us to new facts and to complete our knowledge of the process. The fault of each is, that while insisting on one point it ignores or denies others; and the merit of each is, to have brought into strong relief certain features which deserve our attention. If we take them together we may regard the first as emphasising the changes in the tubules, the second the changes in the stroma and Malpighian bodies, and the third the changes in the bloodvessels.

I shall proceed to give my own descriptions of the changes in each of these tissues, and in the course of my remarks I shall make such comments on the views of others as may occur to me. Let us begin by considering the lesions of the parenchyma.

The preparations before you exhibit the renal epithelium undergoing active changes: the protoplasm has become abnormally clear; its nuclei are swollen and contain many nucleoli, and other uuclei are dividing, and many cells contain two nuclei. As a result of this process of cell proliferation the tubes become filled with free nuclei. This appearance was originally described by Mr. Simon and Dr. George Johnson in the thirtieth volume of the *Transactions of the Royal Medical and Chirurgical Society*. Iu other parts of the preparations these nuclei may be seen undergoing transformation into spindle cells; whole areas formerly occupied by tubules are now occupied by rows or groups of spindle-cells, while other areas in which the lesion is more advanced show nothing but wide tracts of hyaline connective-tissue containing a few spindle and stellate elements. In many cases a tubule or part of one (usually a straight tubule) becomes filled with a delicate granulation tissue derived from these nuclei, which subsequently undergoes gelatinous transformation so as to form a tiny mucous cyst. Many examples of this mode of cyst-formation iu all its stages may be seen in the preparations exhibited.

I am prepared to be told that the proposition that epithelium may be converted into connective tissue is opposed to Remak's embryological law; therefore I may as well remind you that Waldeyer, Schenk, Balfour, and other observers concur in stating that the Wolffian ducts and the Wolffian

(a) A paper read before the Pathological Society of London, March 16, 1880.

tubes and glomeruli are formed from the mesoblast, and we must regard the renal epithelium as a tissue having generic relationships with the connective tissue substances. My proposition receives much support from the paper recently published by Dr. Hamilton, of Edinburgh, on the development of fibrous tissue from the hepatic epithelium in cirrhosis of the liver, and from the observations of Dr. Creighton on the transformation of the mammary epithelium into connective tissue in breast-tumours. I believe it may also be observed in the lung; and I have endeavoured to illustrate the process in all these organs by preparations placed under the microscopes, and by drawings made from them.

Passing to the stroma of the kidney, we find this is broadened and hyaline. The capsule of the kidney is much thickened by inflammatory transformation of the subjacent tubules. The intertubular connective tissue is widened partly by simple swelling, partly by increased intercellular secretion, and partly no doubt by growth of its formative elements. But there is entire absence of any appearance of general nuclear proliferation. The capsules of the Malpighian bodies are widened by similar changes; their lining endothelium proliferates, and forms masses of granulation tissue. The glomeruli atrophy and their endothelium proliferates, forming granulation tissue, which unites with that growing from the capsule, and in most cases undergoes gelatinous transformation so as to form a mucous cyst.

The changes in the bloodvessels have been the subject of much controversy. The appearances may be conveniently grouped under two heads—(1) vessels which have differentiated coats; (2) vessels which have not differentiated coats. The former are greatly dilated and their coats altered. The endothelium of the intima proliferates to form either a layer of granulation tissue rich in cells, or what is probably a later stage, a hyaline connective tissue—in either case narrowing the lumen, sometimes occluding it in great measure, but, as Thoma's measurements have shown, usually leaving the lumen not less than that of a normal vessel in the same situation. The internal elastic lamina is swollen, and its layers are separated. The muscular coat is broadened by swelling of its individual fibres, the nuclei of which are abnormally distinct, and also by an increase in their number. In some cases the muscular coat is atrophied. The adventitia is directly continuous with the hyaline connective tissue which surrounds the vessel. The vessels with homogeneous walls are formed of concentric layers of spindle cells, identical with muscular fibres, and such vessels are often of large size and their walls of enormous thickness. In both these varieties I do not perceive anything more than we are accustomed to find in the vessels of inflamed tissues. I have placed under the microscope a vessel from an enlarged prostate showing thickening of all the coats, and one from the wall of an abscess showing thickening of the muscular coat only, and one from granulation tissue showing the early stage of the process. At the same time, observation and reasoning lead me to admit the occurrence of a certain degree of thickening of the vessels anterior to the commencement of inflammation.

The most fatal objection to any doctrine is that it is new. It is therefore incumbent upon me to show, as far as I can, that the views I have stated rest upon a respectable basis of antecedent observations. We have seen that Dr. Johnson has long maintained that the lesion commences in the parenchyma; he has not been alone in this, and lately has received new allies in Bamberger and Weigert. Aufrecht maintains that all forms of renal inflammation commence in the parenchyma. But all these observers believe that the inflammation ultimately extends to the stroma. The appearance of the nuclei within the tubules has been confirmed by many observers, including Ranvier, Kelsch, and Charcot. Johnson, Moxon, and others believe there is no active nuclear proliferation in the stroma; and Israel and Grawitz found no trace of such a process in the atrophied kidneys following diffuse inflammation induced by temporarily clamping the renal artery. The chief part which is new, and for which I must take the responsibility, is the statement that the nuclei become converted into spindle cells and connective tissue. But even here I have been preceded by Hamilton and Creighton, in other organs. The mode of cyst-formation described by me is, I believe, new in this particular situation, but is a well-recognised process. With reference to those formed within the tubes, Mr. Simon(b) undoubtedly recognised the process, but was led to take a wrong view of its histological relationships. My remarks on the vessels are, with slight modifications, those which are generally received on the Continent. I have tried to limit my remarks to histology only, without entering upon the wider and much vexed question of the etiology of the lesion. So far my statements are illustrated, and I believe amply confirmed, by the preparations before you, and I rely more upon them to convince you than upon any arguments I can devise.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

GUY'S HOSPITAL.

A CASE OF INSULAR SCLEROSIS.

(Under the care of Dr. WILKS.)

Isaac W., aged thirty-six years, formerly second mate in a large ship, was admitted on March 13. His father was dead; cause of death unknown. His mother alive and well, aged sixty-six years; she used to be subject to fits, but had had none since she ceased to have children. Patient had four brothers and three sisters alive, and two sisters had died. There seemed to be no family predisposition to nervous or other disease. Patient stated that he had always enjoyed good health until his present illness, and there was no history of any attacks of venereal disease. About six years ago, when making the voyage home from New Zealand, he fell down suddenly on deck, and on attempting to rise found he was unable to do so. His legs only were then affected; his speech and mental faculties remained unimpaired. There had been no premonitory symptoms whatever. He remained in his berth for ten days, took some medicine, and when he got up again was in his usual condition; he remained quite well until about three months later, when he had a similar but not such a severe attack, and was disabled for three days. Four years ago, on a voyage out to New Zealand, he had another attack from which he has not recovered. On his return to England he was an in-patient at the London Hospital, where he remained ten weeks without any benefit. Subsequently he went into Canterbury Hospital, to a hospital at Brighton, and to Bath, where he took the waters, but in no case was he benefited by treatment.

On admission, patient is a fairly well-nourished, well-preserved man. The pupils are contracted, conjunctivæ slightly œdematous, sclerotics congested. He complains of inability to walk and of loss of power in his body generally. His legs are not wasted, and he appears to have a fair amount of power in them to resist forced movements. There is no loss of general sensibility, nor is there pain in the legs; the tendon reflex is not diminished, and when lying down he can move his legs well, and there are no rhythmical movements present. His arms are wanting in power, and when he uses them rhythmical movements in the direction of the general movements of the limbs are developed; the right arm is rather the worse of the two. He speaks in a slow, drawling manner, and there is a tendency to "scanning" in his speech; there is no tremor of his lips or tongue. He complains of his sight getting bad, and when reading he says the words seem to run together and become like black lines. Nystagmus is not noticeable when he is at rest, but when his attention is aroused and he uses the muscles of the eyeballs the nystagmus is very obvious. He has had no double vision or vertigo, and examination of the eyes with the ophthalmoscope reveals nothing abnormal. Muscular sense appears to be normal; he complains of a cold feeling across the hypogastric region of the abdomen. On further examination it is found that patient is unable to move from bed without assistance; when put on his legs he can walk a little if supported on both sides. There are no rhythmic movements of legs, but only paralytic weakness. When the foot is flexed on the leg and suddenly let go, however, true rhythmic tremors are developed. The loss of

(b) *Loc. cit.*

power is not so well marked in his hands and arms as in his lower extremities, but the rhythmic movements are much more developed as soon as he attempts to use these limbs Patient's mental condition does not seem to be quite normal. He laughs and cries with slight provocation.

He still remains in the Hospital (April 3), and there has been no marked change in his condition.

GENERAL PARALYSIS FOLLOWING INJURY.

(Under the care of Dr. WILKS.)

Cornelius S., a carman, aged thirty-two years, was admitted on March 11, 1880. There was no family history of nervous disease, and the general family record was good. Patient himself had never been laid up but from accidents, and had always enjoyed good health. Seven years ago his body was caught between the pole of a waggon and a wall, but he was not then, he thinks, seriously injured. Five years ago he slipped through a hole in the bottom of his waggon, and injured his leg and knee, which last was swollen and painful for some time. Last October (1879), while unloading a van, he fell a distance of nine feet on to his back, and also struck the back of his head on the edge of the kerbstone. He was then unconscious for six hours, and was taken to Middlesex Hospital. At the time he had difficulty in talking, and he thinks that when he first became conscious he was worse in that respect than at present. The right arm then was weak and trembling, and the right leg weak. He could not then walk so well as on admission here. He remained in Middlesex Hospital for seventeen days under the care of Mr. Morris, and when he left he thinks his condition had improved and was better than now. He then went under the care of his club doctor, but has lately been gradually getting worse, and has been able to do no work. He was very giddy twice before Christmas, and once fell out of the chair on which he was sitting.

Patient is married; his wife has miscarried twice, and had three children born alive and healthy. He has always been healthy and temperate, and has hardly ever touched spirits.

On admission, he is a tall, healthy-looking, well-nourished man. The pupils are equal. The facial muscles are lax, and the countenance has a vacant expression. There is no facial paralysis; the tongue trembles considerably when it is protruded, and his lips tremble when he speaks. His speech is indistinct and hesitating. Sight and hearing are normal. In conversation his mental condition does not seem to be yet affected, and there is no exaltation of ideas. The right arm and leg are weak; the arm is especially so, and tremulous. There is no wasting of muscles in any part of the body, and no anæsthesia. He does not drag his right leg in walking. He complains of continual pain at the top of his head and over the left forehead. The tongue is clear, and appetite is good. Respiration and circulation are normal.

March 15.—He is confused, and cannot talk so well at the end of a conversation as at the beginning. He gets up, and has walked in the grounds. His handwriting is very tremulous.

18th.—To day the patient was seen by Dr. Savage, who considers the case to be one of general paralysis. The condition is unaltered, and there are no prominent mental symptoms.

April 3.—There has been continued difficulty in walking, and patient has complained much of pains in the head. He still remains under notice.

In this as in another case in the wards during last year, general paralysis has showed itself at first by physical symptoms only.

PROGRESSIVE MUSCULAR ATROPHY FOLLOWING INJURY.

(Under the care of Dr. PAVY.)

Walter L., aged thirty-seven years, a farm-labourer, unmarried, was admitted first under the care of Mr. Davies Colley, on March 11, 1880. His father is alive; his mother died twenty years ago with an abscess in her neck; he has two brothers and one sister alive and healthy. Patient states that he himself has always been a healthy and temperate man. Seventeen years ago, while mowing in a field, he strained his right arm; at the time it seemed only a little stiff, but the feeling of soreness soon passed off. He thinks that at the time he noticed some protrusion of the right shoulder. Fourteen years ago he noticed that the stiffness was more decided in the right shoulder, and then it began also to be troublesome in the left. He also felt a slight aching in the small of the back, and he found that the right shoulder was wasting, and the right arm as far as the elbow. After some time the same wasting came on on the left side. The forearm was never affected; but both hands, and especially the left and the left thumb, partook of the atrophy. During this time he was still able to work, but two years ago he became so weak that he could only do the lightest kind of farm labour. Last October (1879) he left work and went to St. Thomas's Hospital, where he was received as an in-patient. There he was treated with galvanism and got a good deal better. In February he left the hospital much better, and was going to try to do some work again, but was sent here by a medical man. On admission, the following notes were taken on the surgical side:—"The arms are much atrophied and very weak, but he is in no pain. The scapulæ can be made to protrude a great distance beyond the ribs; their lower extremities are tilted out almost at right angles with the back. The chest is flat and square-shaped. The clavicles are large and prominent. The legs are not wasted, but are rather weak. The serratus magnus is apparently absent on both sides; the upper part of the deltoid is similarly wanting; the great pectoral and trapezius muscles are small. Patient cannot bring his hand to his mouth without having some rest for his elbow, nor can he oppose his thumb; the thumb muscles are much wasted." On trying the muscles with the interrupted current (fourteen cells), the rhomboidei gave no response; the left supraspinatus responded well; the right supraspinatus after a little did respond, but later on did not; the right and left pectoral muscles answered very slightly to the stimulus; the right deltoid was more irritable than the left. With the continuous current the right infraspinatus muscles contracted well with twenty cells, the left with fifteen cells. The right and left deltoids contracted slightly with fifteen cells, well with twenty and twenty-five cells. No effect was produced in the region of the serratus magnus. The trapezius contracted well on the application of a current for twenty cells.

The heart-beat is very diffused, and the sounds are loud, almost obscuring the breath-sounds over a considerable area. There is no bruit; pulse 74, strong. In other respects the patient's condition was normal.

During his stay in the hospital the continuous current has been used, and, as before, some improvement has been effected.

Typhus and Typhoid Fevers.—In Great Britain it is commonly supposed that Dr. A. P. Stewart was the original discoverer and demonstrator of the difference between typhus and typhoid fevers. The fact is, that although Stewart was prosecuting his studies on this subject simultaneously with Shattuck of Boston, and Gerhard and Peacock of Philadelphia, the two last-named gentlemen published their views in 1837 in the *American Journal of the Medical Sciences*, while Stewart first presented his conclusions in a paper read before a medical society in 1840.—*Boston Med. and Surg. Journal*, February 12.

Iron in Anæmia.—Dr. Hayem related to the Biological Society some trials which he had made of manganese in chlorosis as a substitute for iron, and in which it proved quite useless, iron proving efficacious when afterwards tried in these same cases. It was objected that iron was not the only means of reproducing hæmoglobulin and curing chlorosis. Sea and mountain air, arsenic, Vichy water, in certain cases produced the same results. Dr. Hayem replied that a robust woman may become exceedingly anæmic after a severe hæmorrhage, but the normal blood is in her rapidly reproduced, just as it is in strong animals which have been bled. Moreover, in cases of anæmia resulting from old dyspepsia, when the dyspepsia is cured the anæmia disappears. But besides these there are cases of essential anæmia produced without appreciable cause, to which the name of chlorotic anæmia or chloro-anæmia has been given, and such cases may be submitted to the operation of sea or mountain air, Vichy water, etc., but no result will be obtained. Give iron to them, and they are cured. It is iron alone that will produce this result, for it is to be presumed that if manganese, which most nearly approaches it, fails, all other metals will fail also.—*Gaz. des Hop.*, March 23.

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Medical Times and Gazette.

SATURDAY, APRIL 10, 1880.

LADY NURSES.

We have before us two somewhat curious productions, neither devoid of interest to the hospital physician or surgeon, but which read together give us an insight into the motives of certain, at least, of the ladies who have devoted their attention to hospital nursing. The one consists of certain extracts from the Minutes of a General Court of the Governors of Guy's Hospital; the other is a paper in the *Nineteenth Century*, by Miss Margaret Lonsdale, now, we believe, what is technically known as a "probationer" at Guy's Hospital. The latter is entitled "The Present Crisis at Guy's Hospital," and deals with the disputes which have arisen there concerning the nursing. These, as our readers know, date from the appointment of the present Matron, who resolved on carrying out certain plans of her own, which have resulted in the defection of some of the best nurses and sisters from the Hospital, and the establishment of a chronic state of "aggravation" in the minds of the medical and surgical staff which it is not pleasant to contemplate, still less to feel. Briefly, the Matron would not let well alone, but was bent on making it what she called better, with the not unnatural result of driving a certain number of persons well-nigh to desperation.

Nevertheless, the lady in question has secured a certain amount of support from the powers that be, especially the Treasurer, and in the contest which has ensued the staff has, up to the present time, had the worst of it. It is admitted that the lady has introduced changes, but it is said that these are not fundamental, and that they have not been carried out "without consultation with the Treasurer and the Superintendent." Curiously, not a word is said as regards the staff, who, one would think, ought to be the first consulted. Nevertheless, they are to be consoled by the following:—"The Treasurer having already expressed his desire to take the opinion of the medical staff on such changes which seem still open to adjustment, the governors request the Treasurer and Court of Committees to invite the attendance of any of the medical staff to meet them and the Superintendent *and the Matron,*" etc. Thus the men who say that their measures are thwarted by the introduction of a system of nursing to which they strongly object in its entirety are invited, or "any of them," to consider with the Matron the details of a system to which they object *in toto*. Certainly not dignified for the officers, whatever it may be for the Matron. But all this seems cut-and-dried work. To ascertain the true views and aims of these ladies we must refer to Miss Lonsdale's paper.

This article is neither more nor less than a mass of presumption and ignorance; but its conception and execution will go far to teach men what the aims and views of these lady nurses really are. Anyone who will take the trouble to read it will easily understand the feeling of indignation it has roused at Guy's among both teachers and students; and we do not know that we can better illustrate its tendencies than by citing, *verbatim*, a few of its paragraphs. We need only premise that the article consists of a fancy sketch of the old system of nursing—which no ordinary reader can fail to conceive is meant to be a picture of Guy's in olden days,—and another of the blessings of the modern system of lady nursing. Finally, it contains certain most impertinent remarks on professors and students of medicine. But Miss Lonsdale shall speak for herself.

First, as regards the old system, as she calls it. She tells us that "the main duty which was inculcated on them (the nurses) from their first acquaintance with hospital work was that they must study the character and special requirements and fancies of the particular medical man or surgeon under whom they were placed, with a view of gaining his approbation by every means in their power." "The day nurses were seldom, if ever, allowed to be absent from the ward when the medical officer came his rounds, therefore the only time at which they could obtain air and exercise was after nightfall." "In the evening, by arrangement with the Matron, who was a kind of upper servant or housekeeper, the lower order of nurse or scrubber was left in charge of the patients, while the old-fashioned head-nurse went out to take her hardly-earned holiday—too often, alas! in the nearest public-house. She came back at the regulation hour, more or less the worse for drink, as the case might be, and went to bed to sleep off the effects of it."

What of this is not imaginary is untrue.

"It was unusual for a 'sister' to be moved from one ward to another, and, therefore, in course of time, if she were at all an intelligent woman, in spite of a want of general education and a total absence of any special training in the work of her calling, she would become expert in various ways—especially in attendance upon the medical staff and in prompt and skilful obedience to her orders. She would learn to watch critical cases in the doctor's absence, and to act with ability under his orders. . . . . But all this time she must have remained in absolute ignorance of the first principles of nursing the sick."

Would it surprise Miss Lonsdale to learn that, notwithstanding this fatal ignorance of first principles, we should prefer such a nurse to the most highly instructed lady probationer it has ever been our fate to meet?

Next, as to the new system. Miss Lonsdale tells us that

"nursing is rapidly becoming a fashionable mania." For our own part, we devoutly hope to be protected from any such fashionable manias; and we shall certainly do our best to keep our patients clear of them. But it would hardly strike our professional brethren that, as a recommendation of this system, Miss Lonsdale urges this: the nurse "is constantly absent during the visits of the doctors to the wards, and the nurse next in order takes her place."

Pleasing for the "doctors"; delightful for the patients!

But then the "sisters." Under this so-called "new" system, we are told that "the moral and physical welfare of her patients, nurses, and probationers, and the general tone of the ward, are her main duty and responsibility."

We had somewhere in our brain a lingering notion that her main business was to carry out the instructions of the medical officers, but we poor physicians and surgeons are now to be relegated to our proper places. The Matron is to be the great Creature. "She is bound to act under the authority of her masters, the Governors, the Committee, or Treasurer of the institution," and doubtless such an acknowledgment is a condescension. But we have a more gracious condescension still: "She will consider herself also bound to regard, as far as in her lies, the wishes of those without whom no hospital can exist, the doctors." This, however, need not imply very much, for we are next told that "A doctor is no more necessarily a judge of the details of nursing, than a nurse is acquainted with the properties and effects of the administration of certain drugs."

The force of impudence could not go much further than to be told that medical men are not able "to distinguish good from bad nursing except by results," and this by a —well, by a lady probationer, of a few months' experience.

To improve our position still more, Miss Lonsdale proceeds to say—"Doctors and nurses in our hospitals where the old system of nursing prevails are much in the position, with regard to each other, of head- and under-servants in a large household." Is it any wonder that the Guy's men are wild? Especially when next we are told that the moral influence of the new and superior nurses and sisters is not only to restrain the physicians and surgeons, but also the students in a way which some of the former do not like. And Miss Lonsdale has no hesitation in saying that it is against this moral influence as much as anything else that the staff at Guy's Hospital are now resisting with all the might they possess. "Yet," she adds pathetically, "this unconscious restraint might in turn prove powerful to smooth down the roughness of medical students, who are, as a class, universally acknowledged to be uncouth."

But this is not all. We are told next that "the mere fact of the presence in the wards at all hours of the members of the medical school is often a hindrance of a serious kind to the nurses' work"; yet we are somewhere told that the place to learn medicine is at the bedside. Must it now be at stated times and seasons only—these to be regulated by the nurses? "Ought," asks Miss Lonsdale indignantly, "they to be privileged to investigate, at their own pleasure, whatever may be going on in the wards?"—to which we would reply, in the meekest of voices, "Yes." Miss Lonsdale thinks that the leave of the "officiating nurse" should be first obtained. We should blandly say, "No."

But when we are finally told that at Guy's "familiarity between house doctors and students on the one hand, and sisters and nurses on the other, contributed largely to the low tone of morality, for which the wards were remarkable," we reach a point which is beyond the province of the outsider, but which cannot fail to incense every Guy's man, past and present, to a degree we hardly care to contemplate. To a lady probationer it seems light to insult a whole profession.

A NEW SUBCUTANEOUS METHOD OF OPERATING FOR REMOVAL OF GROWTHS FROM THE INTERIOR OF THE LARYNX.

A SIMPLE, and therefore an excellent, plan of operating on laryngeal growths is described by Professor Rossbach, of Würzburg, in the *Berliner Klin. Wochenschrift*, No. 5, 1880. All the preparation required by the patient is that he shall have learnt to be laryngoscoped quietly. He sits before the operator in the ordinary way, but with his head supported by a photographer's rest. He holds his tongue himself with the right hand covered with a rough, well-fitting glove, and must take care not at the same time to hide the middle line of his neck by his closed hand. The operator either holds the laryngeal mirror with his left hand, or, in the case of a very manageable patient, fixes it in position in the pharynx by means of an appropriate stand. The mirror must illuminate the larynx well, and give a clear view of the part to be operated on, as well as of the lower end of the epiglottis and the anterior commissure of the vocal cords. For the operation itself, a very sharp-pointed, delicate knife, with triangular blade and smooth cylindrical shank, is held in the right hand and pushed through the median lamina of the thyroid cartilage, a few millimetres below the lower angle of the thyroid notch, exactly in the middle line, into the larynx. The precise distance of the puncture from the notch depends on the seat of the growth in the particular case, and it varies from one to five millimetres below it. The point of the knife then appears above and close to the vocal cords. There are no bloodvessels of any importance either on the anterior or posterior surface of the median lamina of the thyroid cartilage, so that no bleeding is to be feared; the hyaline cartilage also, of which it consists, is so easily penetrated even in old people, and so seldom ossified, that scarcely any effort is required to make the knife enter the larynx through it. With the laryngeal mirror the entrance of the knife can be watched, and its movements regulated with the greatest ease during the necessary incisions, etc. The patient feels nothing except the external prick; he is not conscious of the presence of the knife in his larynx, nor does it excite cough, or, as a rule, any desire to swallow. Should deglutition occur, however, it is unnecessary to withdraw the knife, and the latter should be retained between the thumb and forefinger, the finger resting on the larynx, so that the hand and the knife may follow the upward and downward movements of the thyroid cartilage. On the withdrawal of the knife the opening in the cartilage closes hermetically; the tiny skin-wound requires no other treatment than a small piece of plaster. A slight dull pain is all that the patient feels after the operation.

Professor Rossbach uses knives of different breadths of blade according to the size of the growth to be removed. Owing to their thin cylindrical shank they can be moved in any direction, and, if necessary, can be bent to meet special cases. He thinks his method applicable to a large number of operations which have hitherto been performed by the introduction of instruments through the mouth, and its extreme simplicity seems to us to justify his estimate of it. He mentions that Dr. A. Eysell, of Halle, had previously suggested a somewhat similar plan, of which, however, he was ignorant until his colleague, Professor Gerhardt, told him of it. In any case Rossbach claims the first removal of a polypus in this way. Those interested in the operation will find some valuable hints on its previous performance on animals at the end of Professor Rossbach's paper, which our space does not allow us to reproduce. The operating knife is also figured.

STATISTICAL REPORT OF THE HEALTH OF THE NAVY.

Adhering to the precedent of later years, the Medical Department of the Royal Navy has again contrived to issue its statistical report on the health of that branch of the service, for the year 1878, at the expiration of the following twelve months. But the volume has this year undergone a by no means acceptable change. On the representation of the Parliamentary Committee on official statistics, and with the concurrence of the Lords of the Admiralty and the Director-General of the Department, the letterpress has been abridged, and the reports and papers heretofore published in the Appendix have been excluded, as they were considered out of place in a return of this description. By this means not the least interesting portion of the work is lost to the public, as, although it is announced that papers of sufficient professional interest may from time to time be printed in a separate form, it will only be for distribution amongst the medical officers of the service. The various tables have also been so condensed as to show only the totals of cases, invalidings, and deaths, etc., in the different classes of disease and injury, the ships furnishing the principal numbers being detailed in the letterpress. A comparison with the returns of the foregoing year shows that there was a reduction in the invaliding-rate to the extent of ·08 per 1000, but an increase in the death-rate amounting to 7·36 per 1000. This great increase in the ratio of mortality is, however, accounted for by the loss of her Majesty's ship *Eurydice* off the Isle of Wight; but for this melancholy accident the death-rate for 1878 would only have been 7·71 per 1000, or an increase of ·66 per 1000 compared with the year 1877. The death-rate from disease alone was 5·32 per 1000; in 1877 it was 4·91. The lowest sick-rate, as last year, was on the South-east Coast of America Station, and the highest on the China Station; the average sick-rate of the total force was 47·15, which is an increase, compared with the preceding year, of 4·34 per 1000. The ratios of sickness at different ages are somewhat striking, viz.: between fifteen and twenty-five, 1389·05; between twenty-five and thirty-five, 994·85; between thirty-five and forty-five, 812·27; and above forty-five, 611·81. It will thus be seen that the sickness in the first period is more than double that of the fourth—a fact which is the more remarkable when it is remembered how rigid and frequent are the medical examinations to which boys are subjected before being finally pronounced fit for general service in the Royal Navy. The highest rates in this first period are contributed by continued fevers, syphilis, diseases of the absorbent, urinary and generative, and cutaneous systems, and by wounds and injuries. During the second period, diseases of the respiratory, digestive, and cutaneous systems, and wounds and injuries, furnish the bulk of the cases. Wounds and injuries are the chief causes of loss of service during the third and fourth periods, although the ratio in the latter is, as a matter of course, far below that of the younger men, whose duties aloft are more dangerous than those which fall to the share of the men above forty-five. Nothing particular has to be recorded in the shape of outbreaks of disease during the year 1878, either at home or abroad; but a peculiar epidemic form of remittent fever occurred in the *Black Prince*, employed for the principal part of the summer on the coast of Cyprus, which, while resembling the common type of this disease met with in the Mediterranean, exhibited the following distinctive features:—1. The great mildness of the febrile symptoms. 2. The unaccountable tendency to syncope, and the great prostration with which the seizure usually commenced in men however previously robust. 3. Its liability to relapse, especially during the height of the epidemic in Cyprus in July and August. These relapses were of two kinds—either a definite high temperature, attended with malaise, slight headache, and other febrile symptoms, occurring from the tenth to the fourteenth day; or more frequently a return of vertigo, headache, bilious vomiting, or diarrhœa, with a temperature little, if at all, above normal. 4. Greeks, Turks, Maltese, and Indian troops seemed as liable to contract this disease as Englishmen. 5. The usual sequelæ of Mediterranean fever were infrequent. 6. The prevalence and persistence of fever in the ships, and its probable short period of incubation. About one-third of the cases occurring in the *Black Prince* required simply rest for a few hours, and withdrawal from arduous duty for some days, until the unaccountable feeling of prostration had passed away. As a rule, other patients, who had no more than one relapse, were able to return to duty after a fortnight. A great many men attacked made no complaint beyond that of feeling faint and prostrate, and were frequently brought into the sick bay with a slight wound or bruise of the head, the result of falling in a fainting fit, and suddenly assuming the erect posture. The skin commonly was cool to the touch, but the temperature ranged from 100° to 104°.

THE WEEK.

TOPICS OF THE DAY.

The report of the Water Examiner on the quality of the water supplied to the metropolis by the various water companies during the month of February last, states that the condition of the Thames at the various intakes was good only from the 1st to the 8th of the month, when the water became very turbid, and remained in a bad condition until the 25th; it was then indifferent in quality, and continued in that condition for the remainder of the month. The water in the river Lea was also generally bad during the whole month. It must be understood that the foregoing remarks refer to the condition of the water previous to filtration, since the supplies on delivery were found to be clear and bright, except as regards the water supplied by the Lambeth and Grand Junction Companies, which for a few days was of a slightly turbid character, as, pending the completion of the works now in progress by these companies, they have not the means of properly dealing with the water from the Thames in times of such heavy floods as prevailed during the greater part of February. Dr. Frankland reports that the Thames water supplied by the West Middlesex Company, though inferior to that sent out by them in November, December, and January last, was of much better quality than that delivered by any other company drawing from either the Thames or the Lea. The Chelsea Company's water was also less impure than the supplies taken from the same source by the Southwark, Grand Junction, and Lambeth companies, who distributed water quite unfit for dietetic purposes. The water of the Grand Junction and Lambeth companies was slightly turbid, and contained moving organisms. The Lea water delivered by the East London Company was superior to the worst samples of Thames water; but that sent out by the New River Company was much polluted by organic matters, and was not fit for dietetic purposes. It was also slightly turbid from inefficient filtration, and contained moving organisms.

Some interest attaches to the population statistics of two large countries like France and Germany, and the returns which have recently been published show results which are not without importance. In France the attention of statisticians has of late been directed to the steady and serious decrease in the population, as evinced by the gradual decline in the birth-rate. In 1878 the number of births was

937,211—a lower average than that of the previous four years. In 1861 the average was 2·69 per cent.; in 1862 it was 2·65; in 1863 it rose to 2·69 again; but between 1864 and 1868 it sank to 2·63; from 1874 to 1878 it further declined to 2·56, and in the latter year it was only 2·53. The two causes accounting for this decrease are—the fewer number of marriages and, what is far more important, the decline in the number of children resulting from these marriages. In fact, the proportion of children to each marriage is dwindling more and more all over the country, except in Brittany, and in some of the departments in the centre and the south. In the class composed of petty tradesmen, or the well-to-do peasants, there is seldom more than one child per marriage, and M. Baudrillart has stated that in one of the rural communes in Picardy he ascertained the number of children among the best-off of the peasants to be thirty-seven for thirty-five families. To a certain extent the decrease in population is kept in check by the decrease in the mortality, which numbered 839,036 in 1878, or 2·26 per cent., whereas in 1864-68 it was 2·34. But the question nevertheless remains as to what will be the ultimate destiny of France if the decline of population still continues unchecked. In Germany, on the other hand, the estimated population of the Empire at the end of 1878 was calculated in round numbers at 44,211,000; the number of births during that year was 1,785,080, and the deaths 1,228,707, giving an excess of births over deaths of 556,473, or an annual increase of population amounting to more than 1·25 per cent. For every 1000 of the population 15·4 were married, 40·4 were born, and 27·8 died, so that the births were more numerous than the deaths by 12·6 per 1000.

Before leaving Darmstadt, on the occasion of her recent visit, the Queen, accompanied by the Prince and Princess of Wales and other members of the Royal Family, visited the Alice Hospital and School for Nurses there, being received at the entrance by the Committee. The Royal party went over every part of the establishment, and conversed with several of the patients. The prosperity of this charitable institution was the especial care of the late Princess Alice, and to it is now allotted a great part of the interest of the £4000 privately subscribed in England to perpetuate the virtues and the charity of its patroness.

The new seltzer spring recently discovered at Oberlahnstein, between Ems and Coblentz, was formally opened on the occasion of the Emperor of Germany's birthday, and was officially named the "Victoria Fountain." This new spring was accidentally discovered last year by the large quantity of bubbles which were observed to be rising in a pond situated in a brickfield. Examination showed the bubbles to be of carbonic acid, and the conjecture that a valuable spring was near was fully confirmed by the borings which were subsequently undertaken. The water was found to be quite free from iron, and to be more like the well-known "still" *Selterswasser* than any other yet discovered.

At the annual meeting of the Governors of the Carlisle Dispensary, recently held, the report for the year 1879 was presented and adopted. The Dispensary was established in the year 1810, and can therefore lay claim to being one of the oldest institutions of the kind in the country. The resident medical officers, Drs. A. G. Paterson and Valbert Larcher, report that during the past year 3273 patients received treatment with a total mortality of 153; of the different diseases treated, bronchitis ranked highest in point of numbers with a total of 778 cases, the intense cold at the beginning and end of the year under notice, combined with the dampness which prevailed throughout the summer, fully accounting for its great prevalence. Of the 153 deaths recorded, ninety-eight were those of children under five years of age, and nine of persons over seventy. It is satisfactory to note that during a year of such unusual depression in trade the income of the Dispensary was well in excess of the expenditure.

The Chemical Society held its anniversary meeting last week at Burlington House, under the presidency of Mr. Warren de la Rue. The Chairman, in the course of his annual address, contrasted the condition of the Society during the past year with its position in the year 1869. The number of Fellows, it was shown, had increased from 522 to 1034, the income from £1100 to £2700, and the number of papers read from thirty-one to seventy-five. The Chairman further referred to the recent progress of chemistry, special references being made to the decomposition of the elements chlorine, bromine, etc., by Meyer; the photographs of the whole of the spectrum, recently made by Captain Abney; the artificial production of the diamond by Hannay, the synthesis of vegetable colouring-matters and alkaloids, the discovery of a new element (scandium), etc. Before the termination of the proceedings the officers for the ensuing year were balloted for, and Professor Roscoe was elected as President.

An unfortunate and fatal mistake in interpreting a prescription is reported from Bombay. The Italian Consul there—M. Groudona—was suffering from a pain in his leg, and called in an Italian doctor, who proceeded to administer a preparation of morphia. By some mistake an excessive quantity was used, and M. Groudona died the same evening. From evidence adduced at the inquest, it appears that the doctor ordered two grains of morphia, and wrote the word "grana" in full. As this is rather unusual among English practitioners, the chemist who made up the prescription read the word as "grammes." The full particulars of the case are not given, but it would seem to have been gross carelessness on the part of the dispenser to make up a prescription with such an excessive quantity of morphia as two grammes in it.

There has been for some time a desire on the part of the members of the Committee of Management of the Devonshire Hospital, Buxton, to present to Dr. Robertson (who has been for so many years connected with the institution, first as Physician, and more recently as Consulting Physician) some lasting recognition of his services. Various suggestions as to the mode of this recognition have been offered, but as Dr. Robertson declines to accept any personal testimonial, it has now been determined to raise a sum of £3000 for the purpose of erecting a portico, clock tower, and additional lodge to the Hospital, these not being provided for in the sum granted by the Governors of the Cotton Districts Convalescent Fund for the enlargement of the Hospital. By this means it is intended to carry out the double purpose of recognising Dr. Robertson's services and benefiting the institution with which he is so intimately connected, and an appeal for subscriptions to carry out the idea has been made public.

In spite of strenuous efforts on the part of the inhabitants of the neighbourhood to persuade the Surrey magistrates to devote the site of Horsemonger-lane Gaol to a public recreation ground, it appears that the Finance Committee have decided that, in justice to the ratepayers of the county, the site must be sold for the best price obtainable. At the recent Surrey Sessions the Clerk read further memorials in favour of the site being preserved as an open space, and Dr. Carpenter moved as an amendment to the Finance Committee's report—"That the auctioneers be requested not to go on with the sale." He observed that it was a question for all time, and if the Court ordered that the plot of land be covered with buildings, the opportunity of reserving it as an

open space would be lost for ever; therefore he asked the Court to let the matter stand over for a time, so as to give an opportunity to the neighbourhood to form a fund and approach the Court by offering a sum of money for it, such as would justify them in accepting the offer and keeping the space open for ever. This amendment was seconded, but eventually the report of the Committee was adopted by a majority.

MEDICAL MEMBERS OF THE NEW PARLIAMENT.

The number of members of the medical profession in the new Parliament will in all probability be as ludicrously small, in comparison with the members of the other learned and liberal professions, as in the last Parliament, but there will be some changes in the individual members. Mr. Mitchell Henry has been again returned by Galway County, Sir Trevor Lawrence by Mid-Surrey, and Dr. Cameron by Glasgow. Indeed, no medical candidate, old or new, has as yet been rejected; but Leitrim has not yet spoken, so that we know not whether Dr. Brady will or will not return to the House of Commons. Dr. O'Leary was lost to us by death; and Dr. Lush did not again stand for Salisbury. On the other hand, Aberdeenshire West has returned Dr. Robert Farquharson, and the City of Dublin Dr. Robert Lyons—two good able men. The result of the contest between Mr. Lyon Playfair, LL.D., and Mr. Bickersteth, F.R.C.S., for the honour of representing the Universities of Edinburgh and St. Andrews, will not be known for several days longer.

ARMY MEDICAL SCHOOL.

The fortieth session of the Army Medical School was opened on the 1st inst., in the presence of Surgeon-General Massy, C.B., Colonel Farmer, and the staff of the School and of the Royal Victoria Hospital—thirty-five surgeons on probation for the Army, twenty-three candidates for the Indian Medical Service, and three candidates for the Royal Navy, as well as one Staff-Surgeon R.N., and two Surgeons-Major of the Indian Service, have entered for the present course. An able address was delivered by Professor Maclean, C.B., in which he sketched the improved conditions of the Army Medical Department, and expressed a hope that better times were about to dawn for the Navy. He could only speak with doubt about the future of the Indian Medical Department; but he trusted the authorities would be cautious ere they did anything to lessen the attractiveness of a department and a profession to which British India owes not only much, but its very existence itself. After pointing out the advantages the young men of the present day derived from the instruction given in the Army Medical School, he referred feelingly to former colleagues—notably to Dr. Parkes, whose name must ever be inseparably connected with all that is good and great in medical and sanitary science, and to Deputy Surgeon-General Porter, who had perished in the late campaign in Afghanistan, a victim to the arduous duties which devolved upon him in that severe struggle. He also spoke of the loss the Medical Department was about to sustain in the retirement of Surgeon-General Massy, C.B., who is about to be succeeded at Netley by Surgeon-General D. R. Mackinnon.

COLLEGIATE EXAMINATIONS.

The following were the questions on anatomy and physiology submitted to the 173 candidates at the primary examination for the diploma of membership of the Royal College of Surgeons on the 2nd instant:—"Anatomy: 1. Describe the calcaneum. 2. Describe the arrangement and attachments of the perineal fasciæ. 3. Give the attachments of the trapezius muscle; state what structures are exposed upon its removal. 4. Give the dissection required to expose the first portion of the subclavian artery on the right side. 5. Describe the course and relations of the portal vein; name its tributaries, and mention their anastomoses with the systemic veins. 6. The brain being removed from the skull, how would you proceed to expose the corpora quadrigemina? Physiology: 1. Give the physical characters and chemical composition of the blood; describe its corpuscles. What purposes do they fulfil? 2. Mention the average period of eruption of the temporary and permanent teeth. Describe the minute structure of a tooth. 3. Give a description of the microscopical appearances presented by a transverse section of the spinal cord in the cervical region. What are the functions of the cord? 4. Describe the course and minute structure of a renal tubule. What functions have been ascribed to its several parts? 5. How is the circulation of the blood maintained? What is the average velocity of the blood in the larger arteries and veins, and in the capillaries? By what means has this been ascertained? 6. What is the structure of adipose tissue? What are its uses in the economy? and what are the circumstances that lead to variations in its amount?" Candidates have now two distinct papers to answer, containing six questions each, on anatomy and physiology, four of which, and not more than four, must be answered in each subject, the former from one to three o'clock, and the latter from four to six o'clock. At the oral examination, also, they have fifteen minutes at the anatomical and the same time at the physiological tables, instead of ten minutes as heretofore at three tables. The anatomical section is represented by Messrs. Durham, Bellamy, Pick, and Rivington; the physiological by Messrs. Power, Lowne, Morrant Baker, and McCarthy. Mr. Christopher Heath is the chairman. Candidates unable to answer four of the questions in either of the papers have to report the fact to the presiding examiner, and are not allowed to proceed with their examination. A list of the successful candidates will be found elsewhere in our columns.

THE HEALTH OF NOTTINGHAM DURING THE YEAR 1879.

Dr. Edward Seaton, Medical Officer of Health for the borough of Nottingham, has issued his annual summary on the sanitary condition of the district for the year 1879. The birth-rate for the twelve months has been 35·8 per 1000 of the population, which is equal to the average of past years. The annual mortality is calculated at 22·5 per 1000, which is considerably in excess of that for the previous year. In his report for the year 1878, Dr. Seaton showed that the death-rate then recorded—20·9 per 1000—could not be taken to represent the average mortality of the new borough, and the present result has justified his anticipation. The number of deaths under one year was only 16·7 per cent. of the births, whereas in 1878 the return was 18·5 per cent.; but this reduction in infantile mortality is stated to be solely due to the exceptional freedom from autumnal diarrhœa, which, owing to the cold wet season, was far less prevalent than usual throughout the country. Dr. Seaton is careful to remark that the reduction is in no sense an indication of less neglect in the nurture of infants, as the number of inquests held by the borough coroner abundantly proves. The mortality under five years of age was 41·3 per cent. of the total number of deaths, and this high rate is partly accounted for by the prevalence of measles and whooping-cough in the district, as well as of scarlet fever. The excellence of the results attained by the early isolation of cases of infectious diseases, combined with efficient disinfection, is shown in the fact that only in one instance out of seventy-

nine did a second case occur, and this was under circumstances which made it extremely probable that the infection was taken from some other source. Dr. Seaton concludes his summary with an account of a bad case of arsenical poisoning from wall-paper, which occurred in his district during the past year.

THE ELECTION FOR THE CITY OF DUBLIN.

Dr. Robert Dyer Lyons, Fellow of the King and Queen's College of Physicians in Ireland, has been returned, with Mr. Maurice Brooks at the head of the poll, for the City of Dublin. The voting took place last Monday, the 5th inst., and the official declaration of the poll was made by Sir James W. Mackey, Kt., the High Sheriff of Dublin, about 3 a.m. on Tuesday. The numbers polled by each candidate were as follows:—Mr. Maurice Brooks, Home Ruler, 5763 votes; Dr. Lyons, Liberal, 5647; Sir Arthur Guinness, Bart., Conservative, and the late senior member for the City, 5446; Mr. James Stirling, Conservative, 5059. We trust that Dr. Lyons will be able to fulfil his promise to serve the interests of his profession in the Imperial Parliament now that he has been successful in his laudable effort to become a member of the House of Commons.

BOURNEMOUTH AS A WINTER RESORT.

Dr. T. A. Compton, B.A., has published a paper read by him in March, 1879, before the Bournemouth Medical and Meteorological Societies, giving memoranda of the lowest temperatures experienced at Bournemouth and forty-five other English stations during the great cold of December, 1878, with remarks on the rain and snow fall of these places in the last quarter of 1878. From the returns compiled by Dr. Compton, it is to be gathered that Bournemouth takes the position of second warmest of the forty-five stations compared, the first being secured by Ventnor, the mean lowest registration on the eleven coldest days of December, 1878, being at Ventnor, 27·2°; Bournemouth, 25·6°; Torquay, 25·4°; and Llandudno, 25·1°. The special advantage possessed by Bournemouth is, Dr. Compton shows, its comparatively small winter rainfall. In ordinary years this is generally somewhere about midway between that of the cold but dry east coast, and the warm but highly humid districts of Cornwall and South Devon. On several occasions when the snowfall at Bournemouth did not exceed an inch, and remained but for a few hours, places within forty miles had to put up with a fall which could be measured by feet; and Ventnor, which takes the first place as regards temperature, was only twenty-fifth out of the forty-five stations in its rainfall position. The quantity of rain, or melted snow, collected during the last quarter of 1878 varies from 5·32 inches at Bournemouth to 17·28 inches at Truro, Liverpool being second lowest with 5·94 inches. Of the rest, Llandudno had 8·90 inches, Ventnor 8·99, and Torquay 9·90; whilst at Cannes during the same period the rainfall amounted to 16·48 inches.

Mr. John Cooper Forster, F.R.C.S.—At a special meeting of the Council of the Royal College of Surgeons, on the 7th instant, this gentleman was unanimously re-elected a member of the Court of Examiners.

Case of Successful Transfusion.—Dr. Mason relates, in the *New York Med. Record* (February 21), a case of transfusion performed with a rough extemporised apparatus upon a female patient, in whom a condition of great exhaustion had been produced by long-continued vomiting, enemata with defibrinated blood having failed to be of much use. Improvement immediately followed the operation, and eventually the patient recovered.

URÆMIC CONVULSIONS IN CONNEXION WITH HARD, CONTRACTED KIDNEY.(a)

To look at the patient now before you one would hardly be likely to suppose that there was very much the matter with her, and yet she is the subject of an affection which from time to time gives rise to the most serious and alarming symptoms. It is true that she does seem a little anæmic, but with this exception her countenance does not present at all a morbid appearance, and her general condition is apparently that of an individual in the enjoyment of ordinarily good health. I merely call your attention to this circumstance, before passing on to the history of the case, in order to suggest to you that appearances are sometimes deceptive from a medical point as well as from other points of view.

The patient's name is Lillie R., and she was admitted to the hospital just one week ago to-day. She is twenty-one years of age and married, and she has had one child and two miscarriages. Her mother died of phthisis, and she herself is the only one remaining of a family of nine children, most of whom died in infancy. She has usually enjoyed good health, but had five attacks of illness previous to the one on account of which she has sought admission here. These were all of the same character, and, according to her account, consisted of violent paroxysms, characterised by foaming at the mouth and unconsciousness. One of these occurred in the West, two in New England, and two in New York.

When she was brought to the hospital a week ago she was suffering from what was apparently a malarial chill, although the occurrence of certain unusual nervous phenomena in connexion with it seemed to raise some doubt as to whether it was really of this character. In passing, I may remark that we are not infrequently called upon to decide whether a chill is malarial or not, and it is by no means always an easy question to determine. There is one point of considerable weight as regards this, however, which it may, perhaps, be well for me to mention, and that is that, if it is malarial, it is far more apt to occur in the morning than later in the day; while, if it is not, the chances are that it will occur after noon. In the present instance the chill commenced at 2 p.m., and lasted till half-past five, when the house-physician was hastily summoned to see the patient. He found her in a state of clonic convulsions, and frothing at the mouth; but there was no biting of the tongue. Eight ounces of urine were at once drawn off with the catheter, and when a specimen of this was examined it was found to be of a specific gravity of 1022 and to contain albumen, together with hyaline and light granular casts. This, of course, established with reasonable probability (although not certainty) the fact that the patient was in uræmic convulsions. It is a problem which sometimes comes up in the practice of the physician to decide what is the nature of the convulsions from which he finds an individual suffering to whose side he may have been suddenly called, without any opportunity for learning anything whatever of the previous history of the case. A good point is to notice whether the tongue has been bitten, or whether there are any cicatrices on it indicating that this has been done in previous attacks. Such evidence is usually lacking when the convulsions are due to uræmia, but is very apt to be present if the patient is the subject of epilepsy. The crucial test for diagnosticating uræmic convulsions, however, is found in the examination of the urine. It is true that this may contain a small amount of albumen as the result of the convulsions themselves; but if this constituent is present in any considerable quantity we may be reasonably certain that we have uræmic poisoning to deal with, notwithstanding the fact that there may not be the time or opportunity for a microscopical investigation.

The convulsions in the present instance lasted from two o'clock in the afternoon until half-past four the following morning, and the treatment consisted mainly in the free use of morphia, in the form of Magendie's solution. There is no

(a) From a clinical lecture by Austin Flint, sen., M.D., Professor of the Principles and Practice of Medicine and Clinical Medicine in Bellevue Hospital Medical College. (The *New York Medical Journal* for March.)

question in my mind that the administration of morphia in pretty free doses is of considerable service in quite a number of cases of uræmic poisoning; and it seems to do good by placing the system in such a condition that it will tolerate the presence of a large quantity of urea in the blood. As soon as the uræmic character of the convulsions was ascertained, the patient was given eight minims of Magendie's solution of morphia hypodermically, and half an ounce of the infusion of digitalis by the mouth. At half-past seven o'clock ten minims more of the morphia-solution were administered in the same way, and after that a like quantity at half-past eight, at half-past nine, at twelve, at two, and at four in the morning; so that altogether sixty minims were given between half-past seven in the evening and four in the morning. At half-past seven in the morning, three hours after the convulsions ceased, one-fifth of a grain of muriate of pilocarpine was administered hypodermically, and during the whole of that day there was no return of the convulsions. Nausea and vomiting, however, were now becoming prominent symptoms; but they were promptly controlled by the application of a sinapism to the epigastrium and the administration of chloroform in one-drop doses.

From this time the patient was comfortable and did well up to the fourth day from the commencement of the attack, when some of the minor symptoms of uræmic poisoning, such as nausea, headache, tremor, and impaired vision, began to exhibit themselves. At 11 a.m. on this day, accordingly, two minims of Magendie's solution of morphia were administered, and at 1 p.m. one-fifth of a grain of muriate of pilocarpine. At five o'clock profuse diaphoresis took place (with little or no flow of saliva), and the symptoms mentioned promptly disappeared. There is every reason to believe, therefore, that this treatment warded off another attack of convulsions. The next day the patient was up and walking about the ward, and since then she has seemed to be perfectly well. Until to-day she has been taking half an ounce of infusion of digitalis three times a day.

A careful record of the temperature has been kept since the patient has been an inmate of the hospital, but there has never been any febrile reaction. On the fourth day after the onset of the convulsions (that on which the symptoms indicated the commencement of a new development of uræmic poisoning), the quantity of urine was about one-half the amount ordinarily passed during the twenty-four hours by an individual in good health. It was dark in colour, acid in reaction, and of a specific gravity of 1015, while it contained albumen and both light granular and hyaline casts, as before. This condition of the urine was of itself enough to excite apprehensions of trouble. On the day following the whole amount passed during the twenty-four hours was only seven ounces. The urine was dark-coloured and acid, and of a specific gravity of 1014, but contained only a trace of albumen. Still, the very marked reduction in quantity, with a specific gravity denoting deficiency in urea, certainly involved more or less danger. During the next day (which was yesterday), however, the quantity increased to twenty-two ounces in the twenty-four hours. To-day it is found that the urine has a specific gravity of 1010, and contains albumen, but no casts. Between six o'clock last evening and eight o'clock this morning, a period of fourteen hours, the patient passed twenty-three ounces, and she may, therefore, be considered out of danger of any immediate recurrence of uræmic convulsions.

In several points of view this case must be regarded as one of great interest: in the first place, on account of the small amount of urine which she has been in the habit of passing, and the fact that, while urea has certainly been present in abnormal quantity in the system, there were no uræmic symptoms either before or after the occurrence of the convulsions, with the exception of those mentioned as appearing on the fourth day afterwards. Neither do we find the minor indications of uræmic poisoning in the past history, such as headache, dizziness, impaired vision, nausea, and diarrhœa. This case shows, therefore, that, notwithstanding that the minor symptoms of uræmia are of great importance, instances may occur in which the graver manifestations of the condition may suddenly become developed without any premonition whatever. In one case that I now recall, the patient, who had previously been in good health, all at once fell into a state of profound coma, resembling that of apoplexy.

Again, it is interesting to note that, although these convulsive attacks have occasionally recurred for several years now, no œdema of any part of the body has at any time appeared as a result of the diseased condition to which they have been due. I have called especial attention to these negative points relating to uræmia in order to impress upon you the importance of making careful examinations of the urine in a considerable number of cases where the real pathological condition is very apt to be altogether overlooked. This case is also an instructive one, inasmuch as it illustrates the advantages of ascertaining from time to time, from the quantity of urine passed and the specific gravity of the same, whether the patient is eliminating a sufficient amount of urea to insure immunity from the occurrence of convulsive paroxysms. To-day the infusion of digitalis has been discontinued (as it is apt to disorder the stomach when its use is maintained for any prolonged period), and mild diuretic remedies substituted for it. These are the bitartrate of potassa and sweet spirits of nitre, and they will, no doubt, answer very well in the present improved condition of the patient.

We come next to inquire what variety of renal disease it is that has given rise to the trouble from which this patient has suffered. On account of the time that has elapsed since the first outbreak of uræmic symptoms, we may, in the first place, exclude acute nephritis at all events. What, then, is the chronic form here present? The history and symptoms do not correspond with those met with when we have the large white kidney (parenchymatous nephritis). With that condition are associated a large amount of albumen in the urine, very marked anæmia, and especially the existence of general dropsy. The fatty kidney we can hardly recognise by any distinctive signs, although it is apt to be associated with fatty liver; and, as many authorities do not recognise this as a distinctive form of Bright's disease, we may pass it by, and consider the diagnosis to lie between the waxy and the hard, contracted kidney. In regard to the former of these, it has been found that there are, as a rule, concomitant circumstances which render such a diagnosis probable. Thus we are liable to have this form when there is disease of the bones, syphilis, prolonged suppuration, or other wasting process present in the system. By a process of exclusion, therefore, we have arrived at the opinion that the pathological condition here is that known as the hard, contracted kidney. The symptomatic features of the case also are strongly in favour of such a supposition, and are, indeed, to a great extent, diagnostic of this form of renal disease. Thus, the disease seems to have been latent until all at once uræmic convulsions manifested themselves. Then there has been no dropsy whatever in any part of the body. General dropsy does not occur in this form of Bright's disease, although acute œdema of the lungs, which is of a different nature, is occasionally met with in it. The quantity of the albumen and the presence of abundant hyaline and granular casts also point to hard, contracted kidney, as does the low specific gravity of the urine.

The violent convulsive attacks which have occurred several times in the history of this case are probably to be explained as follows:—Supervening upon the chronic condition of the kidney there has occurred every now and then an acute inflammation of the tubes, and this, in connexion with the trouble previously existing, has had the effect of producing an explosion, so to speak, of uræmic symptoms.

External Urethrotomy with the Thermo-Cautery.—Prof. Verneuil stated at the Société de Chirurgie that he had twice recently practised external urethrotomy by a procedure which seemed to possess so many advantages that he would recommend it to his colleagues. Formerly, he observed, when the bistoury was employed, great difficulties were caused by the hæmorrhage which ensued; for, although this was not sufficiently abundant to be dangerous, it was extremely embarrassing to the surgeon. By means of the thermo-cautery, on the contrary, he has executed the operation in both instances with great facility and without any loss of blood whatever. In one of these cases a very narrow stricture had resulted from a fall on the perineum which produced rupture of the urethra; the operation was terminated in ten minutes. In the other case the stricture was complicated with perineal fistula, and the attempts at dilatation always induced fever accompanied by the passage of pus.—*Gaz. des Hop.*, March 20.

FROM ABROAD.

The Paris Hospital Mortality Returns.

In his report to the Paris Hospital Medical Society on the mortality during the last quarter of 1879 (*Union Méd.*, January 29, February 3, 5, 7, and 10), Dr. Ernest Besnier observes that the series of temperate winters seems to have become closed. To the cold winter of 1878 has succeeded the excessive one of 1879, which can only be compared to the most extreme winters of the latter years of the preceding century, whether as regards the amount or the duration of the thermometrical depression. Calculated from 1806 to 1870, the mean temperature of the months October, November, and December, taken together, was 7·1° centigrade, while the mean of these three months in 1879 was only 2·3° cent.—that is, the very extraordinary difference of 5°. The rainfall was very much less than the mean, being only 82 millimetres, as compared with 126 millimetres, the mean calculated for this period from 1804 to 1872. A large quantity of snow fell, which lay on the surface for some weeks. During this quarter the *general mortality* observed in the Paris hospitals and hospices exceeded the corresponding mean of the seven anterior years—the total mortality of 1879 (3242) exceeding the mean mortality of the seven years (2970) by 272. The same increase was observed during the whole year, in which the mortality was greater than had been noted during the preceding eight years.

Questions of great interest arise as to the relation between a severe winter and the public health, and whether diseases in general assume, during the prevalence of great cold, a special grave character. Are certain affections created and others abolished, or are they only exaggerated or attenuated? Such questions are of the greatest interest, although they arouse little attention at the present time. Sydenham paid great attention to them, and in regard to the severe winter of 1676, finding that diseases were less violent and less epidemic than in ordinary years, he came to the conclusion that epidemic diseases are not due to the sensible qualities of the air, but to some secret quality of this element. This proposition, which is generally true when applied to the mean seasons of temperate climates, ceases to be conformable to the reality in extreme climates or in excessive seasons. Had Sydenham observed under similar conditions to those which have just been passed through, he would have made the necessary distinction. As he taught, under common conditions there is no constant and manifest relation between the constitution of the atmosphere and the number and gravity of ordinary affections; and the secret qualities, the unknown conditions, of the atmosphere upon which the great epidemic oscillations immediately depend are just those which call for study, and upon which observation is throwing new light.

"Without doubt seasonary medical constitutions exist, *i.e.*, a predominance of diseases or symptoms proper to certain determinate epochs; but such predominance is most commonly a very complex result of various and multiple pathogenic conditions produced in individuals, in the soil, in the atmosphere, in the aliments and drinks, etc., and from which the pathological condition or symptomatic forms are directly derived. Thus, for example—contrary to what would be expected solely from the thermometrical condition of the atmosphere—pneumonia is more frequent and more severe in the spring than in winter, articular rheumatism does not attain its maximum either in cold seasons or cold climates, and typhoid fever is not connected with thermometrical variations, etc. Whenever a thermometrical influence exhibits itself it does so indirectly. Typhus, variola, diphtheria, and the plague are diseases with a hivernal predominance; but it is the concentration of individuals in tents, barracks, or houses which engenders the germinative atmosphere, and not the degree of temperature. If very hot summers are followed by intense epidemics of typhoid, it is on the condition that the subsoil surface of water has remained for long or locally depressed. If scorbutus often attacks sailors during their wintering, it is because they are confined and deprived of fresh vegetables, etc. But when the conditions of the temperature suddenly become *excessive*, the sensible qualities of the air are so manifested as to leave place for no kind of doubt, especially when they operate upon an unprepared and unprotected population, and that in a direct ratio to its physical and physiological destitution.

"During the months of October and November the general mortality of the hospitals was inconsiderable, and notably inferior to the corresponding months of former years; but the scene suddenly changed in December, when the mortality increased from 915 in November to 1443 in December. While in November there were but 87 cases of pneumonia, there were 205 in December, with a mortality of 50 per cent."

1. *Affections of the Respiratory Organs.*—The deaths from *phthisis* amount regularly to from 200 to 300 per month in the Paris hospitals, and although the variations according to season are inconsiderable, they are well marked; the mortality, which descends to the lowest point of the curve in the summer quarter, and gradually rising during the two winter quarters, reaches its culminating point in the spring, during the second quarter of the year. Thus, the deaths in the four successive quarters of 1879 amounted to 778, 880, 744, and 750. Dr. Besnier dwells upon the necessity of providing much more effectual means in Paris than now exist for dealing with phthisis among the poor, seeing the large proportion of these who fall victims to the disease. The annual mean mortality from this disease is 8000, while the hospital mortality alone from it is not less than 3000—so that the hospital population furnishes 37 per cent. of the annual mortality from phthisis, while the general hospital mortality only represents a fourth of the entire mortality of Paris. *Pleurisy:* In 1873 Dr. Besnier called attention to the fact that the mortality from pleurisy had exhibited a progressive increase from 1867, and that this increase exactly coincided with the introduction of thoracentesis into general use. From his figures it resulted that deaths from this disease rose progressively from 7·8 per cent. in 1867 to 15·6 in 1873. He did not conclude that the new method of treatment was justly chargeable with such increase, for as it was then only on its trial its employment might have been imperfect or unwarranted. But the experience of six subsequent years shows scarcely any improvement in this respect, for while the mean annual mortality for 1868-73 was 12 per cent., that for the period 1874-79 has been 11 per cent. The disease is, therefore, either more grave than it was twenty-five years since, or the new method of treating it has not been advantageous. [During the discussion which followed the reading of Dr. Besnier's paper several speakers protested against the conclusion (which, however, Dr. Besnier denied wishing to draw) that the increased fatality of pleurisy is dependent upon the adoption of thoracentesis. They maintain that the disease is more frequent than heretofore, and especially tuberculous pleurisy, and that it is of greater gravity; while it was also less accurately studied heretofore,—so that deaths from pleurisy were attributed to pneumonia or even phthisis.]

2. *Diphtheritic Affections.*—The normal summer attenuation of diphtheria occurred as usual in 1879. For the whole of Paris the deaths from this disease amounted to 529 in the first quarter, 468 in the second, 407 in the third or summer quarter, and 573 in the fourth quarter. In the hospitals the deaths sank from 181 in the first quarter to 171 in the third quarter, the diminution being prolonged into October—the difference between the quarters being still more shown by the proportionate mortality, this rising from 52 per cent. in the third quarter to 70 per cent. in the fourth quarter.

3. *The Eruptive Fevers.*—These during the fourth quarter of 1879 (with the exception of variola, which is a disease with a regular hivernal exacerbation) exhibited a mean degree of frequency. *Measles* attained the lowest point of its annual curve, which will be raised again during the two ensuing quarters, especially the second of these. The total number of cases admitted during 1879 was 60, whereof 10 proved fatal. *Scarlatina*, while remaining, as usual, the least prevalent of the eruptive fevers in the Paris hospitals, exhibited an exacerbation in 1879 (50 cases with 8 deaths), which contrasts with the excessive and almost incredible rarity of the disease in these establishments for a long series of years—the disease prevailing all the time with excessive frequency and extreme gravity in neighbouring countries (especially England) connected with France by incessant intercourse. There were 139 cases of *erysipelas* with 24 deaths.

4. *Small-pox.*—The number of deaths from this disease in the *whole of Paris* only amounted in 1878 to 89. An exa-

cerbation commencing in the last quarter of that year was continued and increased in 1879, so that by the end of the second quarter of the year 416 deaths had occurred. But, following the seasonary course of the disease, a summer attenuation occurred, so that in the third quarter the deaths diminished to 158, as compared with the 265 of the second quarter. Then, following the rule of the diseasc, the deaths rose again during the fourth quarter to 330, making a total for 1879 of 904 deaths. [Since this report was made the deaths have continued to increase, so that during the first ten weeks of 1880 there have been registered 665 deaths from small-pox.]

In the *hospitals*, also, small-pox, of which only 18 cases (with 1 death) were received in 1873, has gradually increased in frequency since 1874, when there were 65 cases with 13 deaths. In 1875 there were 627 cases with 86 deaths; and in 1876 ,672 cases with 111 deaths. In 1877 the number of cases diminished to 325 with 43 deaths, and in 1878 to 134 cases with 24 deaths; but in 1879 the cases rose again to 1579 and the deaths to 267. Dr. Besnier reiterates the complaints which he has so often made in former reports, that "necessary measures of public prophylaxis are not taken; that the practice of vaccination is performed without a regular medical organisation; that not only the hospitals allow to go away, uninterfered with, the public vehicles which have brought numerous small-pox patients, but that transport of patients of all sorts takes place in these vehicles; that nowhere is there a place for the detention of doubtful cases; that convalescents from small-pox are not subjected to any special provisions; that there is no real disinfection of clothing, bedding, etc.; and that there is no organisation of temporary or permanent hospitals for isolating the disease, notwithstanding that they have been shown to be urgently wanted and a true means of public safety."

5. *Typhoid Fever.*—The total number of deaths which took place in all Paris from typhoid during the quarter was 319.

6. *Puerperal Affections.*—Under this heading Dr. Besnier reiterates the complaint he has so frequently made as to the tardiness with which hygienic improvements are introduced into the Paris hospitals: "If nothing can equal the zeal with which the physicians incessantly demand those hygienic measures, the application of which alone can lead to the extinction of puerperal affections, so also nothing can equal the extraordinary tardiness with which measures are adopted in compliance with their reiterated representations. At every step of the nosocomial scale, the most deplorable contrast prevails with, on the one hand, the powerful scientific movement which furnishes so great a number of perfected means for the succour of the sick and the preservation of the valid, and, on the other hand, the impotency, or rather the power of immobility and nihilism, upon which are wrecked all attempts at progress and reform. Insufficient in number and extent, the hospitals are still more insufficient in organisation, in localisations appropriate to their destination, in material means, and in executive *personnel*. Several of them, if they are not rapidly improved, will become the opprobrium of the epoch. The lying-in services in the general hospitals are still in a state of inferiority, which really cannot be allowed to persist indefinitely."

In corroboration of this criticism, Dr. Besnier cites the report of Dr. Siredey on the lying-in service of the Lariboisière for 1879. According to this, thirty deaths occurred among 779 deliveries; and even when fourteen of these are abstracted as not being justly referable to hospital conditions, the mortality still stood at about 2 per cent.

Treatment of the Itch at the St. Louis.—In a clinical lecture (*Gaz. des Hop.*, February 10), Prof. Hardy states that he has since 1852 employed in the treatment of the itch the ointment composed of one part of lard, a sixth part of flowers of sulphur, and a twelfth part of subcarbonate of soda. So efficacious have proved thorough and almost violent frictions with this, continued for twenty or thirty minutes, especially at the natural bends and folds of the skin, that the cure is absolutely certain. Among from 4000 to 5000 adults so treated at the St. Louis, in only one instance was a repetition of the frictions needed. The ointment, after the rubbing, should be left on for several hours, or all night, without washing. Next day an emollient bath may be taken, which may be repeated every twenty-four or forty-eight hours for a week.

GENERAL CORRESPONDENCE.

THE INDIAN MEDICAL SERVICE.

Letter from Dr. J. Irving.

[To the Editor of the Medical Times and Gazette.]

Sir,—The officers of the Indian Medical Departments of Bengal, Madras, and Bombay, I am convinced, must feel under great obligations to you for the earnest and effective manner in which you have alluded to their grievances in articles which appear in your issues of March 4 and April 3. Few, I believe, will disagree with you in thinking that there should be a single, and not, as now, a dual, administration of the Medical Departments of the European and Native Army in India. It was so in the time of the Hon. East India Company, whose officers held the administrative appointments, controlling both European and Native medical arrangements; and there was in addition an officer of the Army Medical Department in each presidency (I believe), who looked after the correctness of certain returns which were required for home offices. Although I belonged to the service of the good old Company, I always considered that it would have been fairer if in those days medical officers of the Imperial Army had had their share of administrative appointments; and I further consider that in the present amalgamation the local officers have claims which have been utterly ignored when they are made subordinate to the Army Medical Department—which they are since the Surgeons-General are in future to belong to that Department, and that rank in the Indian Medical Department is to be abolished. Officers of the H.E.I.C.S. were guaranteed that their claims to promotion, etc., should be maintained in "any plan for the reorganisation of the Indian Army." But there must be a very evident ignoring of this clause of an Act of Parliament (Vic., Act 23-24, cap. 100) if the highest grade which then existed in the Service is abolished, and the circumstances of the two Departments are exactly reversed in their relations to each other.

In 1863 the Government of the day attempted to amalgamate the Indian Medical Department with the Army Medical Department, and introduced a Bill into Parliament for the purpose; but this Bill was rejected by the House of Commons. Now, I want to ask this: If an Act of Parliament was required in 1863, how is it that the change then contemplated can in 1880 be effected by an order of the Viceroy "under instructions from the Secretary of State for India"? And further, Can an order of the Viceroy set aside an Act of Parliament? This matter no doubt will be brought up in the new House of Commons, in which it is to be hoped high-handed feats of Imperialism in India will not find such favour as they have done of late. I am, &c.,

James Irving, M.D.,
Late Surgeon-General to the Bengal Government
Tunbridge Wells, April 6. (Retired).

EXTRACTION OF A STONE FROM THE KIDNEY, OR NEPHRO-LITHOTOMY.

Letter from Mr. Henry Morris.

[To the Editor of the Medical Times and Gazette.]

Sir,—In the answers to correspondents in the last issue of the *Medical Times and Gazette* I see one headed "Chirurgeon," referring to a case of renal calculus said to have been operated upon by Mr. Paul, of Stroud. In the *Gentleman's Magazine* for August, 1733, is to be found the following:—"Mr. Paul, a surgeon at Stroud, in Gloucestershire, lately extracted from the kidneys (*sic*) of a woman, by an incision through her back, a rough stone, as large as a pigeon's egg, and made an entire cure. It is the first operation of the kind ever performed in this kingdom; the case will soon be published." I have not been able to find any further record of this case; if there is one, and it is known to "Chirurgeon," or if any of your readers know more about it, or of any other similar case, I should be very glad to be informed.

The case of Mr. Hobson, the English Consul at Venice, operated upon by Marchetti of Padua, is reported in the *Philosophical Transactions* of 1696, by Mr. Bernard, F.R.S. The report, however, is that given by the patient ten years after the event, not by the surgeon or any other witness of the operation.

It is more than probable that in both these cases there was a sinus in the loin, the result of an abscess in the kidney, and that the existence of the stone was known in this way.

The case of the French Archer of Bagnolet, who is said to have been delivered up to the Faculty of Paris for experiment when under sentence of death, is mentioned by Mézerac, and alluded to by Paré; but it is entirely discredited, and, even if true, the report leaves it uncertain whether the stone was not removed from *the bladder*.

So far as I can at present ascertain, the thoroughly authentic case has yet to be published, of a stone being removed from an otherwise healthy kidney where there was no sinus, no abscess or other swelling, and in which the diagnosis rested entirely upon the general symptoms of renal calculus. I am, &c., Henry Morris.

2, Mansfield-street, Portland-place, W., April 7.

REPORTS OF SOCIETIES.

THE PATHOLOGICAL SOCIETY.

Tuesday, March 16.

Jonathan Hutchinson, F.R.C.S., President, in the Chair.

The Histology of Granular Contracted Kidney.

Dr. Saundby (of Birmingham) exhibited numerous microscopical preparations and drawings illustrative of his views of the histology of granular kidney. A full abstract of his paper is printed elsewhere in our columns (see page 398).

Dr. Greenfield also exhibited a series of microscopical specimens illustrative of the histology of granular kidney. He had been disappointed in his hope that Dr. Saundby would treat of the pathology of this disease, as well as of its mere histology. Thus, he had hoped to hear from him some explanation of the etiology of the disease, of its relations to morbid states in other parts of the body, and of the manner in which it interfered with the renal function. Each of the three views of the histology of the disease mentioned by Dr. Saundby probably expressed part of the truth, a fully and more accurate knowledge of which would gradually be obtained with improved methods of investigation. He had brought some specimens to illustrate what he considered to be the initial and important changes in the kidney. These changes he believed to be quite different from those described by Dr. Saundby. He had never been able, although he had examined a very large number of specimens, to trace the development of connective tissue from the renal epithelium, so that he thought such a transformation must be very rare, if it occur at all. Dr. Saundby had referred to Charcot's views regarding "epithelial cirrhosis," but still he had not really adopted Charcot's opinion, according to which interstitial changes often followed upon epithelial changes. After ligature of the ureter in a guinea-pig, Charcot had found great interstitial proliferation, which he thought was subsequent to epithelial proliferation. But he found the glomeruli and arteries to be free from change—a condition very different from that found in granular kidney. Indeed, he (Dr. Greenfield) thought that a proliferation of the epithelium lining the glomeruli was a primary change in all cases of chronic renal disease, even in the lardaceous kidney; and this point was one which he thought was illustrated by the specimens he exhibited. This epithelial proliferation induces a growth of connective tissue, which causes, by compression, atrophy of the capillaries of the glomerulus. There was also proliferation of the epithelium covering the glomerulus, and this might become fused with the lining of the capsule in one fibrous mass, and thus produce what Dr. Saundby had alluded to as the mucous degeneration of the glomerulus. There was, moreover, a thickening of the fibrous capsule of the glomerulus which spreads out round the convoluted tubes. That, then, was what the speaker believed to be the initial and most important change in granular disease of the kidneys, next to the increased arterial tension always present with contracted granular kidney. This change affecting the glomeruli could be detected in scattered patches through the kidneys of those persons who, with the general fibroid disease, had diseased kidneys. The glomerulus with its corresponding renal tube may be regarded as a renal element. If the secretion of the water of the urine, which is known to be chiefly effected in the glomerulus, be interfered with, the tube below is deprived of its usual stimulus, and its lining epithelium must therefore atrophy and die. Moreover, as the blood-flow through the glomerulus must be impeded, the circulation beyond in the vessels surrounding the convoluted and straight tubes must also be interfered with. Hence the excretion from them must be lessened, and they must also tend to become atrophied. These glomerular changes are often found limited to localised conical patches of the cortex, and to the regions surrounding the interlobular arteries. In pure granular kidney, therefore, the change was essentially atrophic; there was wasting of the tubes with degeneration of the lining epithelium, only a few cells of which remained. As he had intimated, he had found this glomerular change in almost all the specimens of chronic renal disease he had examined. In the form occurring after scarlatina the glomerular change was very constant, and might be the only alteration that could be found. Thus, in a specimen from the kidney of a boy who had died with acute dropsy on the forty-ninth day after an attack of scarlet fever began, the changes were almost confined to the glomeruli. In the large white kidney, again, the change was essentially interstitial, all stages of the glomerular change being found. Also in the later stages of lardaceous kidney this glomerular change was present, when, from capillary obstruction, the blood-flow round the convoluted tubes is interfered with, and thus atrophy and loss of function ensue. In certain cases of granular kidney the primary glomerular change seemed to be due to a thickening of all the coats of the blood-vessels. Atheroma, or endarteritis deformans, supervened in the later stages. He had given much prominence to these glomerular changes, because they are not clearly pointed out in text-books. They are, of course, not the primary change in the large white kidney. In acute renal disease there is inflammatory exudation with epithelial degeneration, and the connexion between the tubular and glomerular changes he had traced in the kidneys of a boy who died from renal mischief three months after an attack of scarlet fever. Though the organs appeared at first sight to be healthy, he had found that there was in places great proliferation of the cells covering the glomeruli, and that the epithelium in the convoluted tubes had lost its granular appearance and had become flattened below.

Dr. Mahomed was inclined to think that Dr. Saundby's specimens really bore out the interpretation he had put upon them. But he was sure that all forms of granular kidney did not originate in the same way. There were at least three very different varieties of contracted kidney. In one class there was no clinical evidence of the existence of the granular kidney, where the kidney simply shared in a general fibroid change—the arterio-capillary fibrosis of Gull. The second variety was the mottled yellowish granular kidney—the true granular kidney—with symptoms during life. It was this variety the histology of which the speaker thought might be explained in the way Dr. Saundby hed suggested, by the development of fibrous tissue from epithelium. The third variety is the lardaceous granular kidney. The speaker was of opinion that many large white kidneys begin at first as organs affected with lardaceous disease. Changes in the arteries and a true nephritis, following upon the lardaceous disease, produce the granular condition of the organ.

Dr. N. Moore could not agree with Dr. Mahomed as to the distinction between the first two forms of granular kidney he had mentioned. The speaker thought there were two distinct varities. The first variety was that which often followed scarlet fever, and was at first attended by the symptoms of large white kidney; but if death did not ensue for two or three years, the kidneys were found to be small and pale with a thick capsule. The other variety was associated with a general fibroid change throughout the body. It may be impossible to distinguish these two varieties after they have become granular, but they must have begun differently; and the speaker asked Dr. Saundby if he could give any information regarding this difference.

Mr. Eve objected to Dr. Saundby's hypothesis that connective tissue was developed from the nuclei of epithelial cells. Such a view was contrary to our present knowledge of development.

Dr. Hoggan agreed with Mr. Eve. He thought, moreover, that Dr. Saundby's preparations did not lend any presumption to the theory advanced. What Dr. Saundby had called small cysts the speaker thought were simply tubes denuded of epi-

thelium seen in section, and what had been called spindle cells he (Dr. Hoggan) regarded simply as the nuclei of the shrivelled and atrophied tubes seen in section.

Dr. Saundby, in reply, pointed out that as the kidney was developed from the mesoblast, its epithelium had genetic relations with connective tissue. He thought that granular kidneys were subject to intercurrent inflammatory attacks which caused the chief differences between different specimens. He had not wished to enter on the large and distinct subject of the etiology of the disease, confining himself exclusively to the histology of the contracted kidney. As to Dr. Greenfield's view, it would imply an early interference with the water-secreting function of the kidney, if the glomeruli were primarily diseased. But this function was not interfered with at an early stage.

Dr. Greenfield replied that the increased secretion of water was explained by the greater lateral pressure in the healthy glomeruli which must result from the obstruction in the diseased glomeruli. The atrophy of the excreting tubules with their epithelium explains the diminution in the solid constituents of the urine. The very first step in chronic granular disease of the kidney was probably a vascular change, the subsequent changes being due to alterations in the other renal structures.

New Method of Mounting Eyes, etc.

Dr. Mules (of Manchester) exhibited a series of specimens mounted in a new method first suggested by Mr. Priestley Smith of Birmingham. The exhibitor had made some modifications in the details of the method. The specimens showed various diseased conditions of the eyeball, etc., and they retained very well the recent appearances, although some of them had been mounted for two years, even the œdematous and congested appearance of the tissues being preserved—a result which could not be got by steeping in alcohol, that always caused contraction. Of the specimens one showed fibro-scleral thickening, nearly filling up the whole intra-ocular cavity; another was a white-celled sarcoma of the choroid, containing numerous giant cells; and a third showed neuritis and hydrops of the sheath of the optic nerve as the result of an apoplectic clot. Each specimen was first put into Müller's fluid and hardened in the method best adapted for the tissue; the colour of the Müller's fluid was discharged by chloral solution; the specimens were then immersed in a fluid composed of one part of glycerine to three of water, and after that in a mixture of equal parts of glycerine and water.

Various Tumours.

Mr. Nunn exhibited sections and drawings of three tumours. The first was a recurrent cancer of the breast, from a woman aged about fifty-five, from whom Mr. Curling had removed the primary growth seven years previously. The primary growth had been found by Dr. Goodhart to be a peculiar form of scirrhus, and the recurrent growth retained the peculiar characters. It consisted of minute cysts lined by columnar epithelium, and containing obsolete blood. The second growth was a specimen of melanosis of the finger, also from a lady between fifty and sixty years of age. For more than a year there had been an ecchymosed appearance of the finger, attributed to bruising by pressure of the ring on the adjoining finger. But during the last six months the growth had assumed the characters of malignant melanosis. The melanotic cells were found to be largely mixed with leucocytes, as if the later development of the growth had been due to the multiplication of the leucocytes among the older melanotic cells. The third specimen was an epithelioma of the penis from a patient aged seventy.

Mr. Godlee had exhibited before the Society a few years ago a tumour very similar to Mr. Nunn's specimen of cancer of the breast, consisting of cysts which contained old blood. After removal by caustics it had recurred locally, and also in the axilla. He had never until now heard of a similar case.

Dr. Thin said the microscopic appearances of the tumour satisfied him that it was one of those growths he had described before the Medico-Chirurgical Society as duct-cancers, which were essentially the same in structure as the tumours called adenomas. In the commoner forms of these there was found a cluster of small epithelial tubes, but in other cases like the specimen shown by Mr. Nunn a further development went on, so that a large mass of cells was formed instead of the tubes. These cells broke down in the centre of the mass, and formed a cavity lined by epithelium. Transition forms between the common adenoma and these rarer varieties were to be met with. When cancer of the breast followed upon eczema of the surface of the nipple, it was always, so far as he had found, of the form just described, but the disease was not always preceded by eczema of the surface. It was in such cases that the disease, beginning from the epithelium of the larger ducts, was most rapid and fatal, being much more severe than when it originated deep in the breast from the smaller ducts.

Mr. Nunn, in reply to Dr. Stephen Mackenzie, said there was no local recurrence and no secondary deposit in the case of melanosis of the finger.

Disease of Pulmonary Valves.

Dr. N. Moore exhibited this specimen, taken from a patient who died of acute pneumonia of the right lung one week after parturition. The pulmonary valves were all thickened and converted into pouches with very narrow mouths. When fresh the valves were swollen-looking and red; but as the body generally was putrid, this was not thought to demonstrate that the endocarditis was recent. The case was interesting as bearing on those recorded in Dr. Angus Macdonald's book on heart disease during pregnancy. There was no evidence of pulmonary embolism.

Ulcer of Stomach.

Dr. N. Moore also exhibited this specimen, showing a small ulcer or abrasion near the cardiac opening of the stomach. The erosion was shallow and irregular in form. The patient was a woman aged thirty-four years, who died of an obstruction of the ileum, and had violent attacks of vomiting before death, in one of which the exhibitor conjectured that the ulcer had been formed. In the jejunum there were two small ulcers of the same character.

The following specimens were exhibited by card:—

By Mr. Alban Doran—1. Dilatation of the Fallopian Tubes. 2. Dissection of Calf of Leg in a case of Infantile Paralysis, showing fatty degeneration of the muscles and nerves.

By Mr. F. Eve—Dissection of Leg in Congenital Talipes Equino-Varus, showing fatty degeneration of the muscles.

By Mr. Hulke—Drawings of Cancer.

By Dr. N. Moore—Aneurism of the Mitral Valve.

The President announced that Dr. Hilton Fagge had consented to introduce the special discussion on Rickets, which is to commence at the second meeting of the Society in November.

CLINICAL SOCIETY OF LONDON.

Friday, March 19.

E. Headlam Greenhow, M.D., F.R.S., President, in the Chair.

Spontaneous Gangrene of the Thumb and Fingers of the Right Hand.

Mr. Thomas Smith read a paper on a case as above. A child, aged three, was admitted into hospital for an abscess in the thigh, which ran a favourable course under antiseptic treatment. The patient was slightly rickety, well nourished, spleen palpable, extremities inclined to be cold and blue. Ten days after admission, while in bed, in the early part of October, the right hand and fingers became cold, blue, and quickly gangrenous, a line of demarcation forming at the metacarpal joints. There were no signs of plugging of any of the large vessels of the limb. While the gangrene was in progress the child suffered from pyrexia, but in ten days' time regained her ordinary state of health. The fingers and thumb separated at the metacarpal joints. Mr. Smith could not account for the occurrence of gangrene; no signs of renal disease, cardiac mischief, or arterial embolism were detected. The child, though liable to cold hands and feet, was warmly clad, well fed, in fair health, and yet, as if by some accident, one hand had become chilled beyond the limit whence recovery was possible.

Dr. Symes Thompson related the case of a Russian General who had consulted him, and whose feet were so cold, and consequently weak, that he could not walk at a time for more than five or ten minutes. Both his feet had since become gangrenous; but his heart was healthy, and the vessels of the lower extremities and other parts seemed to be quite healthy.

The President remarked that the condition in the child's case was not unlike chilblain.

Mr. Croft inquired if a microscopical examination of the blood had been made. Gangrene was due, amongst other causes, to deficient nerve-supply, to disease of arteries (such probably being the cause in Dr. Thompson's case), and to change in the blood itself. This was apparently the cause in Mr. Smith's case, for the child's health was impaired by the abscess in its thigh. Were there any symptoms of septicæmia?

Mr. Gould inquired if there was evidence of poisoning by carbolic acid. In a case of amputation through the hip-joint which he had related to the Society, it had seemed that thrombosis, which had supervened, was due to poisoning by carbolic acid.

Mr. Macnamara remarked that, in poisoning by carbolic acid, the white corpuscles were rendered motionless. Could the formation of a clot be thereby induced?

Mr. Smith said that carboluria did not occur until nearly three weeks after the gangrene had commenced. He himself inclined to the view that it was an extreme case of chilblain. But there were no other chilblains; and the child was well nourished, though of flabby texture. There was no sign of septicæmia. He had not examined the blood.

Congenital Cystic Hygroma.

Mr. Thomas Smith read a paper on two cases of the above-named disease. Both patients were between three and four years old, with large cystic hygromata occupying the right axilla, right side of the neck, and extending on to the upper arm. These were admitted into the Children's Hospital within a week or two of one another. In the one case inflammation was excited by the introduction of three carbolised catgut setons; in the other it had resulted from a blow. After a lengthy convalescence, in the first case of six months, and in the last case of five months, the patients were discharged, and were now, more than a year afterwards, cured, the tumours having shrunk so as to be unnoticeable. Mr. Smith remarked that since his published experience of the disease in the *Bartholomew's Hospital Reports* he had seen a large number of cases, and had been still more convinced of the uncertainty of the prognosis in the disease where left to itself, as it at one time would make progress, and at another recede; indeed, in the same growth, at the same time, one cyst would be increasing while another was drying up. In respect of treatment of a curative kind, he had nothing better to recommend than that of attacking the cysts with carbolised catgut setons, and thus exciting inflammation in them. Though this plan was not devoid of risk, yet it was less dangerous than removal, and much more reliable than injection by iodine tincture. He had never tried Morton's iodo-glycerine solution, but thought it promised well.

Mr. Haward thought the treatment by setons the best, although it was not free from risk. Many cases underwent spontaneous cure. He had lately seen two cases of the kind; in one, a fall had produced extravasation of blood, which, being absorbed, the original tumour also disappeared. In another case, cure had been spontaneous, and it was here noticed that, as some cysts lessened in size, others grew more tense, as if inflammation of varying intensity were occurring. In hydrocele, inflammation of different degrees of intensity was requisite in different cases, in order to begin absorption. He thought that in these growths, as in nævus, the greater the tumour the greater was the liability to spontaneous cure, in consequence of the increased risk of injury.

Mr. Godlee desired to know more of the pathology of these cases. He had recently removed a small though rapidly growing congenital tumour of the kind from a child's arm; and had found the lining membrane to be composed of lymphatic epithelium.

Mr. Parker had treated a case by the passing of a seton, but the cyst in a few months refilled. Then the child had scarlatina, and the cyst disappeared. He had also seen a case at the London Hospital treated by Mr. Maunder. The growth in that case consisted of highly nucleated fibrous tissue, with spaces filled by serous fluid.

Mr. Marsh said that before Mr. Smith's valuable monograph on the subject appeared, surgeons had great difficulty in treating these cases in consequence of the difficulty in diagnosis. The roots of the tumour were often beyond the reach of surgical aid in the deepest parts of the neck. Such was the condition in a case mentioned by Mr. Cæsar Hawkins. But the cases did not occur in the neck only. Mr. Holmes had removed such a growth from the ischio-rectal fossa, and in doing so had exposed three inches of the rectum. That patient did well. Mr. Marsh had removed a large tumour of the kind from the zygomatic region of a child nine days old. It had extended nearly to the internal carotid artery, and was growing rapidly. In its removal he had also taken away necessarily one half of the soft palate, and the child had done well. These tumours were found at all parts of the neck, body, and arms. The tumour might in many instances be left alone, unless it were likely to cause death. The seton often made the child ill for a long time, and in some cases caused death.

Case of Intra-thoracic Sarcoma.

Dr. de Havilland Hall read an abstract of this case. H. A., a youth aged nineteen, was admitted into Westminster Hospital, under Dr. Hall's care, on December 5, 1879. The patient stated that up till nine weeks previous to admission he had enjoyed good health, that he caught cold while playing at cricket, and that his illness began with languor and loss of flesh. He applied to a medical man, who told him that he was suffering from pleurisy. On admission he complained of slight cough, but with no expectoration, and of shortness of breath on exertion. Decubitus on the left side. Over the right lung there was good resonance on percussion, with puerile breathing. The left chest was absolutely dull up to the second rib, the dulness transgressing the median line; above second rib the resonance was somewhat boxy; posteriorly there was dulness to spine of scapula, and a tympanitic note above. The side was immovable, with marked rounding, and there was bulging of the interspaces; vocal fremitus not quite absent. Breath-sounds inaudible except faintly at apex and along spine; a faint creak audible at angle of scapula. Heart-impulse one inch to inner side of, and one inch below, right nipple; sounds clear. A diagnosis of pleural effusion was formed. The patient was accordingly tapped in two or three places, but no fluid followed, the end of the instrument being blocked up with a little "cheesy," flaky matter. Two days after admission a free incision was made in the fifth interspace, with antiseptic precautions; on introducing the finger a mass of soft "cheesy" material was found in every direction; a drainage-tube was left in the opening. No marked alteration occurred till December 21, when the patient appeared much worse, suffering from shortness of breath, and he coughed up a little frothy rusty sputa. The next day there were the physical signs of pneumonia of the right base, and he died on the 23rd. The post-mortem examination showed that the whole of the left pleural cavity was occupied by a soft brain-like mass, which microscopical investigation showed to be a round-celled sarcoma. The left lung was collapsed and lying along the spine. The heart was pushed over to the right; the outer border of the right ventricle extended five inches to right of middle line, the tumour itself extending two inches to the right of the same line. The lower lobe of the right lung was non-crepitant, and resembled damson cheese in colour and consistence. Dr. Hall remarked on the extremely short history of illness given by the patient. He pointed out that the physical signs were in every particular those of an extremely large pleural effusion, with the exception that vocal fremitus was not quite absent. He drew attention to the rapid growth of the tumour, as shown by the increase in the area of dulness and the displacement of the heart which took place under observation. He regretted that he had omitted to examine microscopically the so-called "cheesy" matter which adhered to the aspirator after it was withdrawn; examination of this substance would doubtless have sufficed for an exact diagnosis before death. The growth apparently sprang from the anterior mediastinum.

Mr. Parker had injected a similar growth in the neck of an adult with Morton's fluid.

Mr. Smith thought the largest of these growths were possibly the most likely to undergo spontaneous cure. But the tumour often interfered with life, and it was then necessary for the surgeon to intervene. These tumours were found on all parts of the body. He had seen one in the kidney in a child, and another in the abdomen of another child, which rendered the boy rotund and translucent like a gooseberry. An operation was postponed, as the general health was good. He then fortunately fell from his chair one day whilst at dinner, "burst internally," was very ill for a week, and then recovered. He thought these tumours were composed of

fœtal cellular tissue, like the gelatiniform tissue of the umbilical cord. Although the tumours might be cured spontaneously, they might (as in a case mentioned by Mr. Cæsar Hawkins) begin many years afterwards to grow again.

Dr. D. Powell said that, as far as the physical signs went, he knew of no means of diagnosis except with the aspirator-needle. He inquired why, as the swelling, upon puncture, was found to be solid and not fluid, Dr. Hall was not satisfied with that discovery, but proceeded to incise the chest. Some of these lymphomatous tumours surrounded vessels, and so one after a time found pressure-signs.

The President thought it unfortunate that the cheesy material brought away by the trocar was not examined; but he did not think the failure to obtain fluid upon puncture made the diagnosis sure. In two cases of his own in the Middlesex Hospital, he had been certain that fluid was present, although it was not revealed by the needle; and it was found upon subsequent puncture. In lymphoma there was not often pressure on vessels; whereas in cancer it was usually present.

Dr. F. Taylor mentioned a case of empyema in which only at the third puncture, and that with a very long needle, was the fluid, which was pus, found.

Dr. Powell said his remarks applied only to cases of such extreme effusion or growth as displaced the heart, when puncture should clench the diagnosis. Was there hæmoptysis in Dr. Hall's case?

Mr. Gould thought that the thick layer of concrete pus lining the chest often blocked the aspirating needle, and prevented fluid from escaping.

Dr. Hall said that Mr. Butlin, who had examined the tumour, found it to be a sarcoma, not a lymphoma. The history of the case was quite unlike that of a solid tumour. There was the wetting when playing at cricket, with pain in the chest thenceforth; and in nine weeks' time all the signs of rapidly increasing and large pleural effusion were present. He had not heard of a thoracic tumour growing so rapidly, consequently he had tried the several punctures, for he held it to be disgraceful to allow a man to die of pleural effusion without attempting to relieve him by operation. The patient had had no hæmoptysis.

OBITUARY.

MICHAEL HARRY STAPLETON, M.B. Univ. Dub., F.R.C.S.I.

We have to announce the death of this well-known Irish surgeon on March 30, after a few days' illness of bronchitis. He was seventy-two years of age at the time of his death. We cull the following facts concerning his life from an interesting notice in the *Freeman's Journal* of Monday last, the 5th inst.:—Having been educated at Clongowes, Mr. Stapleton entered Trinity College, Dublin, at the early age of sixteen, and in due course proceeded to the degrees of Bachelor of Arts and of Medicine. In 1826 he became the apprentice of the late Mr. Rawdon Macnamara, Professor of Materia Medica in the Royal College of Surgeons, and in 1831 he obtained the diploma of that body. He used often tell with much humour an episode of his student days. Happening to enter the lecture-room when the class was fully assembled, he thought he would play his master's part, and for many minutes, amidst the cheers and laughter of the pupils, lectured away. He was only made aware of the cause of their exuberant mirth by getting a sound box on the ear from the professor, who during the entire time had been standing behind him. The next few years were spent on the Continent, every part of which he visited, and he studied with great zeal in the Parisian hospitals. He ever remained a devoted admirer of French surgery, and so frequently quoted its great teachers, Baron Boyer, Baron Dupuytren, and Baron Larrey, that he got to be generally known among the profession in Dublin as "the Baron." Succeeding Mr. Adams as Surgeon of Jervis-street Hospital in 1835, for forty-five years he served that institution with a zeal with which no similar institution has probably been ever served. Hours were spent every morning in caring for the sick poor, he himself usually dressing cases of wounds and operations. His night visits were also frequent.

For nearly twenty years Dr. Stapleton examined in the College of Surgeons, and was specially feared by the idle, ill-prepared candidates. For, being himself eminently practical, he hated answers learned by rote from books, and not the fruit of steady hospital work. When, however, the question, "To pass or not to pass," came on, his natural kindliness made him a lenient voter. At the Surgical Society of Ireland he was a constant attendant and very frequent and esteemed speaker. His best-known writings were an analysis of the works of Ricord and an essay on club-foot, for the cure of which deformity he was one of the first to repeat the operation of Baron Stromeyer. Among honorary distinctions, he held the Chair of Anatomy in the Royal Hibernian Academy and the Foreign Membership of the Anthropological Society of Paris.

NEW INVENTIONS AND IMPROVEMENTS.

PATENT MALTED NURSERY BISCUITS.

Messrs. Hill and Son, of Bishopsgate-street, London, manufacture some malted nursery biscuits which we can strongly recommend. The very pleasant flavour of the biscuits is of itself enough to make them popular, and they are moreover very easy of digestion and highly nutritious. They may be made into infants' food with either hot water or hot milk-and-water; and we may add—though such a caution ought not to be needed—that this food, like all other "infants' food," should always be freshly prepared for use. The biscuit may be very advantageously used to make excellent nursery puddings. The same firm prepare also a malted nursery biscuit powder, which may be used instead of the biscuits.

PURE ABSORBENT COTTON-WOOL.

This cotton-wool, prepared by Messrs. W. G. and J. Strutt, of Belper, is an excellent example of the kind of wool now coming so largely into use for surgical and other purposes. It is exquisitely white, fine, soft, and pure; and largely absorbent, being so perfectly purified from grease, as well as from all other impurities, that when thrown into water it instantly sinks to the bottom.

ANTISEPTIC ABSORBENT PADS.

Many of our readers are, no doubt, acquainted with Mr. Sampson Gamgee's teachings on the high value of absorbent and medicated surgical dressings, and know what large use he makes of absorbent pads and bandages. These articles are now admirably well manufactured by Messrs. Southall Bros. and Barclay, of Birmingham. The pads are made of cotton-wool tissue, perfectly purified and absorbent, enclosed in bleached, absorbent gauze, and are beautifully soft and highly elastic. The open wove bandage also is absorbent, soft, and at the same time firm and strong. The pads and bandages may be obtained treated with benzoic and carbolic acid; and these are, as Mr. Gamgee says, "perfectly absorbent and elastic, and powerfully styptic and antiseptic." These appliances will be found of great value for surgical dressings and for use in childbed.

CUPRIC TEST PELLETS FOR SUGAR.

These pellets, which were introduced, it will be remembered, not long ago by Dr. Pavy, as a urinary test in diabetes, represent the ordinary cupric test solution. Being in the dry state, the substances composing the test do not undergo change, and consequently are always fit for use. For testing purposes a pellet is placed in a test-tube with about a drachm of water, and heated till a clear solution of a deep blue colour is formed. An equal bulk of the suspected urine is then added, and the mixture boiled. The pellets will, no doubt, be found very handy and convenient, as they are easily carried about, only requiring to be kept dry in a well-closed bottle or case. They are prepared by Mr. W. T. Cooper, 26, Oxford-street, London.

The Report of the Council of the Cremation Society, London, just issued, states that, acting under advice, they do not intend to apply to Parliament this year for powers to use the crematorium at Woking. Meantime, they propose to improve their grounds and get ready for the time when they are permitted to act, which they are sanguine enough to think will come soon. It is intended to expend £1000 on the cemetery immediately.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed their primary examination in Anatomy and Physiology at a meeting of the Board of Examiners on the 5th inst., and when eligible will be admitted to the pass examination, viz. :—

Baker, John H., student of the Newcastle School.
Beverley, John M., of the Manchester School.
Bowe, Arthur, of the Leeds School.
Bull, William C., of the Cambridge School.
Chadwick, Charles S., of the Manchester School.
Challinor, Cedric, of the Manchester School.
Collier, Joseph, of the Manchester School.
Dacre, John, of the Leeds School.
France, Edward, of the Sheffield School.
Garman, Walter C., of the Liverpool School.
Haddock, William J., of the Charing-cross Hospital.
Holton, Richard, of the Manchester School.
Hosford, John, of the Cook School.
Lessey, Sandford S., of St. Thomas' Hospital.
Lowe, Thomas P., of the Liverpool School.
Polson, James R., of the Birmingham School.
Shilleto, Henry, of the Birmingham School.
Sunderland, Septimus, of the Birmingham School.
Swift, Harry, of the Cambridge School.
Wilson, Alexander, of the Manchester School.

The following gentlemen passed on the 6th inst., viz. :—

Barley, David H., student of the Newcastle School.
Coombe, Charles F., of the Sheffield School.
Dodd, Anthony, of the Newcastle School.
Fenwick, Henry M., of the Newcastle School.
Francis, William H., of the Bristol School.
Hall, Alfred, of the Manchester School.
Hurry, Jamieson B., of the Cambridge School.
Jones, Griffith G., of the Liverpool School.
Jordan, Thomas L., of the Manchester School.
Millhouse, George, of the Leeds School.
Moreton, John S., of the Manchester School.
North, John H. of the Birmingham School.
Pigeon, Henry W., of the Cambridge School.
Preston, George, of the Manchester School.
Richmond, James, of the Manchester School.
Roe, Arthur D., of the Cambridge School.
Salmon, Lawrence E. A., of the Bristol School.
Schacht, Frank F., of St. George's Hospital.
Wilson, Arthur H., of the Liverpool School.
Withers, John F., of the Manchester School.

Four candidates were rejected. The following gentlemen passed on the 7th inst., viz. :—

Aldred, John C., student of the Cambridge School.
Aspinall, Samuel, of St. Mary's Hospital.
Berry, John J., of the Manchester School.
Carter, Eustace G., of the Leeds School.
Faunce, Charles E., of the Middlesex Hospital.
Furnival, Francis H., of St. Thomas's Hospital.
Harrison, Edward, of the Cambridge School.
Hind, Wheelton, of Guy's Hospital.
Joberns, William, of the Birmingham School.
Martin, Sidney H. C., of University College Hospital.
Pope, Henry, of the Leeds School.
Rowell, Robert H., of the Newcastle School.
Scatchard, Walter, of the Leeds School.
Tibbles, John T., of the Charing-cross Hospital.
Wenyon, Edwin J., of Guy's Hospital.

Five candidates were rejected. The following gentlemen passed on the 8th inst., viz. :—

Berry, James, student of St. Bartholomew's Hospital.
Dent, Harry L. R., of King's College Hospital.
Dunn, Louis A., of Guy's Hospital.
Frost, George, of the Middlesex Hospital.
Horrocks, William H., of University College Hospital.
Neblitt, Hugh R., of the Middlesex Hospital.
Pryce, Thomas D., of St. Bartholomew's Hospital.
Sutton, John B., of the Middlesex Hospital.
Thring, Edward T., of University College Hospital.
Treadwell, Oliver F. N., of St. Thomas's Hospital.
Williams, John H. H., of Guy's Hospital.

One candidate was rejected.

Collegiate Prize.—At a quarterly meeting of the Council of the Royal College of Surgeons on the 8th inst., the Collegial-Triennial Prize was awarded to Dr. George Arthur Woods, M.R.C.S. Eng., of Southport, for his essay "On the Anatomy and Physiology of the Third, Fourth, and Sixth Nerves, as illustrated by observation and experiment in health, and by reference to the effects of injury and disease." This triennial prize consists of the John Hunter Medal executed in gold, to the value of fifty guineas, or, at the option of the successful author of the dissertation, of the said medal executed in bronze with an honorarium of £50. Dr. Woods was already well known as an Astley Cooper Prizeman of 1877, for his essay "On the Anatomy, Physiology, and Pathology of the Sympathetic Nervous System."

APOTHECARIES' HALL, LONDON.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, April 1 :—

Adams, Joseph, Royal Infirmary, Edinburgh.
Davies, Jenkin, 33, Sidney-road, Stockwell.
Fraser, Donald Alexander, Weston-super-Mare.
Walters, Frederick Rufenacht, The Waldrons, Croydon.
Wheeler, Frederick John, 31, Grafton-road, Holloway.

The following gentlemen also on the same day passed their Primary Professional Examination :—

Garrard, Charles Rowland Ordish, Guy's Hospital.
Rowell, Robert Henry, Newcastle-on-Tyne.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to all new Appointments that take place.

ROBERTSON, R., M.D. Edin.—Physician to the Liverpool Workhouse and Fever Hospital, *vice* R. Gee, M.D., appointed Consulting Physician.

SHAW, WILLIAM, M.B., C.M. Edin., M.R.C.S. Eng.—House-Physician to the North Staffordshire Infirmary, Hartshill, Stoke-upon-Trent, *vice* Alexander Morison McAldowie, M.D. Aber., C.M. Univ. Aber., resigned.

TAYLOR, HAROLD GILBERTSON, M.B. Lond., M.R.C.S. Eng.—Assistant Medical Officer to the Royal Albert Asylum for Idiots and Imbeciles of the Northern Counties, Lancaster, *vice* D. T. Playfair, M.B., resigned.

BIRTHS.

CLARK.—On April 6, at 19, Cavendish-place, W., the wife of Andrew Clark, F.R.C.S., of a daughter.

KAVANAGH.—On April 3, at Wickham-road, the wife of P. Kavanagh, M.D., of a daughter.

SYMES.—On April 1, at Ward's End, Halifax, the wife of Edmond West Symes, M.D., of a son.

TODD.—On March 30, at Leslie House, Oxford, the wife of M. Stanley Todd, L.R.C.P., of a son.

MARRIAGES.

ANDREWS—EDWARDS.—On April 6, at Putney, Samuel Andrews, L.R.C.P., of Basingstoke, to Alice, second daughter of F. L. Edwards, Esq., of Putney, and of Sydney, New South Wales.

CHAWNER—CLOWES.—On March 31, at Kensington, Alfred Chawner, L.R.C.P., to Emily S. L., eldest daughter of William Clowes, Esq., Chancery Registrar, of 86, Holland-road, W.

CROCKER—FUSSELL.—On April 3, at Brighton, Henry Radcliffe Crocker M.D., L.R.C.P., of 28, Welbeck-street, W., to Constance Mary, only child of Dr. Fussell, of Brighton.

GABE—FINCHAM.—On March 30, at Hounslow, John Rees Gabe, M.R.C.S. and L.S.A., of London, to Marion Lucy Senior, elder daughter of the late Frederick Fincham, Esq.

HAYMAN—AMYS.—On March 31, at Epping, Sidney Arthur Hayman, L.R.C.P. Lond., to Mary Caroline, eldest daughter of the late J. D. Amys, Esq., of Lynceley Grange, Epping.

HOLMES—FOX.—On March 31, at Greenock, Robert Holmes, Esq., of Cloneagle, co. Galway, to Belle, younger daughter of John Fox, M.D., of Ardgowan-square, Greenock, N.B., formerly of Carlesmore, co. Cavan, Ireland.

HUTCHINGS—BANKS.—On March 30, at Colombo, Robert Huntriss Hutchings, M.R.C.S., of Delmar, Fort McDonald, Ceylon, to Beatrice Caroline, eldest daughter of the late George Fletcher Banks, Esq., Fleet-Surgeon R.N.

MILLER—FAWSSETT.—On March 31, at King's Langley, Richard Shalders Miller, M.B., F.R.C.S., of Windsor, to Rose, youngest daughter of Frederick Fawssett, F.R.C.S., of Wisbeach.

MINNITT—SAUNDERS.—On March 31, at Stoke-next-Guildford, Joshua Robert Minnitt, M.B., to Kate Marion, daughter of Edward Saunders, J.P., late of Ballinderry Park, co. Tipperary.

MOORE—SMITH.—On March 30, at Westfield, Sussex, Norman Moore, M.D., Warden of the College, St. Bartholomew's Hospital, to Amy, eldest daughter of William Leigh Smith, Esq., of Crowham Manor, Sussex.

SINCLAIR—HOOPER.—On February 28, at Howick, Natal, South Africa, George Charles Sinclair, Esq., to Cella, eldest daughter of Joseph Hooper, M.D.

SWAIN—ARCHBELL.—On April 3, at Brixton, Edward Swain, L.R.C.P., Medical Superintendent of the Three Counties Asylum, Arlesey, Beds, to Florence Annie, eldest daughter of the late James Archbell, Esq., of Regent's-park.

VIVIAN—SUGDEN.—On March 31, at Winchmore Hill, R. T. Vivian, M.R.C.S., of Chase Side, Southgate, to Annie, daughter of Samuel Sugden, Esq., of Oak Lodge, Southgate, N.

DEATHS.

BURNE, JOHN, F.R.C.P., of Richmond Lodge, Bath, at the United Hospital, Bath, on April 3, aged 86.

DICKSON, MAUDE FITZWALTER, daughter of Walter Dickson, M.D., R.N., at Fairfield, Upper Norwood, on April 1, aged 10.

HEATON, CHARLES, L.R.C.P., at Leek, Staffordshire, on March 25, aged 63.

ROBATHAN, Dr. J. W., eldest son of E. Robathan, L.R.C.P., of The Grove, Risca, Monmouthshire, at Main-street, Hyde-park, Pennsylvania, U.S., on March 9, aged 38.

WINSLOW, WILLIAM ST. JOHN FORBES, fifth son of L. S. Forbes Winslow, M.B., M.R.C.P., at Sussex House, Hammersmith, on April 1, aged nine months.

VACANCIES.

BATH GENERAL HOSPITAL, Bath (Mineral Water Hospital).—Registrar. Applications, with testimonials, to be sent in before April 21.

CHILDREN'S HOSPITAL, BIRMINGHAM.—Resident Medical Officer and Assistant Resident Medical Officer. Candidates must be registered in accordance with the Act 21 Vict., cap. 90; and their certificates of registration, with testimonials, to be sent to the Hon. Sec., L. Parker, Esq., on or before April 22.

DENTAL HOSPITAL OF LONDON, LEICESTER-SQUARE, W.—House-Surgeon. Applications to be sent to the Honorary Secretary at the Hospital, on or before April 14.

DOVER HOSPITAL AND DISPENSARY.—House-Surgeon. (*For further particulars see Advertisement.*)

ISLE OF WIGHT UNION.—Medical Officer. The election will take place on April 15. Applications to be sent to the Clerk's Office, Newport, up to April 14.

METROPOLITAN ASYLUM DISTRICT.—Assistant Medical Officer. Candidates must be duly registered and qualified to practise both medicine and surgery. Applications and testimonials to be delivered on or before April 15. (*For further particulars see Advertisement.*)

METROPOLITAN FREE HOSPITAL, 81, COMMERCIAL-STREET, SPITALFIELDS, E.—Assistant House-Surgeon. Candidates must be fully qualified. Board and residence are provided for. Applications, with testimonials, to be sent to the Committee, care of George Croxton, Esq., Secretary. (*For further particulars see Advertisement.*)

NOTTING-HILL PROVIDENT DISPENSARY.—House-Surgeon. Applications, with testimonials, to be sent to the Hon. Secretary, W. P. Collins, Esq., 8, Pembridge-gardens, Notting-hill, W., on or before May 25. (*For further particulars see Advertisement.*)

PARISH OF ST. MATTHEW, BETHNAL-GREEN.—Assistant Medical Officer. Candidates must possess a double qualification in medicine and surgery. Salary £150 with board and residence. (*For further particulars see Advertisement.*)

SHEFFIELD GENERAL INFIRMARY.—Assistant House-Surgeon. Applications, with testimonials, to be addressed to the Secretary of the Medical Staff of the Infirmary, on or before April 10.

WORCESTER COUNTY AND CITY LUNATIC ASYLUM.—Junior Assistant Medical Officer. Candidates must be duly qualified and registered, unmarried, and not above thirty-five years of age. Applications, with testimonials, to be sent to Dr. Sherlock, at the Asylum, on or before April 24. (*For further particulars see Advertisement.*)

UNION AND PAROCHIAL MEDICAL SERVICE.

RESIGNATIONS.

Huddersfield Union.—Mr. P. Macgregor has resigned the Crosland Moor Workhouse: salary £50 per annum.

Lichfield Union.—Dr. Lilley has resigned the Ogley Hay District: salary £50 per annum.

APPOINTMENTS.

Bellingham Union.—John P. Elliot, L.R.C.P. Edin., L.R.C.S. Edin., to the First District and the Workhouse.

Foleshill Union.—John Orton, M.R.C.S. Eng. and L.S.A., to the Foleshill District and the Workhouse.

Tavistock Union.—G. W. Northey, M.R.C.S. Eng., L.S.A., to the Milton Abbott District; J. G. Butters, L.R.C.S. Edin., L.R.C.P. Edin., to the Whitchurch and South Lydford District.

PROGRESS OF PUBLIC HEALTH.—In consequence of the General Election, it has been considered advisable to fix the date for the Conference on this subject—which has been held annually by the Society of Arts since 1876—somewhat later than was originally intended, or than has been the case in former years. It will, therefore, be held in the beginning of June. As at the previous Conferences, the Right Hon. James Stansfeld, M.P., late President of the Local Government Board, will be in the chair. A programme of subjects for discussion has been drawn up by the Executive Committee, and will be submitted to the Conference. The following are the subjects included:—1. The development of Local Government administration, especially by the constitution of county boards. 2. The extension of the powers of the local authorities of urban and rural sanitary districts. Amendments in the Public Health Act. 3. Sanitary inspection and classification of dwellings. 4. Amendments in the Rivers' Pollution Prevention Act. 5. The advisability of strengthening the administrative organisation of the Local Government Board. Local Government Board administration areas. 6. Further suggestions by sanitary authorities It is announced that the detailed programme will be issued shortly, and that copies can be obtained, when ready, from the Secretary of the Society of Arts, by any person who applies. The programme will also be issued to sanitary authorities throughout the kingdom. It is not proposed to make any attempt to procure papers which may be read and discussed; but the Committee state that they will be glad to receive any communications containing fresh information, or giving accounts of progress made since the last Conference. Such communications, if approved by the Committee, will be printed and circulated at the Conference, but it is probable that time will not admit of any discussion being taken upon them.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—Bacon.

Dr. R., Boston, U.S.—We are sorry we cannot give the information you asked for. We have searched in vain for the advertisement.

Dr. Dixon has resigned as a Director of the Legal Medical and General Stores, and is not a consenting party to any allotment of shares under existing circumstances.

Interesting to Gardeners.—The French Minister of Agriculture has directed the prefects to report what kinds of fruit trees, pines, vines, and cereals suffered most and least from the December frost last year. The damage sustained by the Paris parks was very great: in the Bois de Boulogne 54,000 evergreens, 20,000 firs, and 30,000 deciduous trees are required to fill up gaps, while in the Champs Elysées 3200 trees were killed and 6000 require cutting down to the roots. The total loss to the Municipality in the parks, avenues, and nurseries is calculated at a million francs.

Aqua Pura.—Many towns derive their whole supply of water from the chalk strata—amongst many others the towns of Brighton, Croydon, Portsmouth, Chatham, Gravesend, Canterbury, and Winchester.

Octavius.—The numbers of deaths from small-pox in England and Wales in the years 1876 and 1877 respectively were 2413 and 4280, the difference being entirely due to the small-pox epidemic in London. The report that Mr. Nye, of Chatham (who was said to be a Secretary of the Anti-Vaccination Society), had lost two children through vaccination, was not true. The medical certificates—one of which was the result of a coroner's inquest—showed the cause of death to have been cholera.

Persistent Occupation of Unhealthy Dwellings.—The Dublin magistrates have recently fined, in sums varying from £3 10s. to £5 each, a number of persons for disobeying the order of the magistrates by persistently occupying houses unfit for human habitation.

New Metropolitan Asylum for Imbeciles, Darenth.—We understand this institution will be opened for the reception of inmates in the course of the present month.

The Prospect of Cheap Meat.—It is announced that the Americans are having large steamers built with "refrigerating holds" to carry meat from Chicago to Montreal, and thence to Europe. The *Great Eastern* steamship is undergoing the necessary alterations to adapt her for the conveyance of live cattle, and there appears no reason to doubt prime American meat being (including all expenses) introduced in England at from 4d. to 5d. per lb. Moreover, the Australians, encouraged by the successful experiment of the *Strathleven*, have determined upon the extension of a trade thus commenced, and intend to utilise the Sydney Exhibition building for storing frozen country-killed meat preparatory to shipment.

P. D., Holborn.—The abatement of the nuisance to which your inquiry refers is shown in the returns of the number of bakers reported by the police under the Smoke Nuisance Act. Thus, in 1874 the number was 644, and in 1877, 434; that 120 summonses were applied for in 1874, and only 63 in 1877; that out of 3130 bakers in the metropolis, as defined by the Act, 3067 conducted their business so as to obviate any necessity for legal proceedings against them.

Statistician.—According to the latest returns, the rates of mortality were—in Bombay 42, Calcutta 29, Madras 38, and the Punjaub 25 per thousand of the population.

Speculative Builders.—The evasion of the by-laws by not a few builders, in the utilisation of materials which are a direct and flagrant infraction of these legal requirements, still needs the vigilant exertion of our district surveyors, especially in respect to stopping the use of defective mortar in the construction of new buildings. In consequence of a representation from the Paddington Vestry, that "road-slop" was being very generally used, instead of mortar made of lime and sand, in the erection of new buildings in the parish, the Metropolitan Board of Works has ordered that the district surveyor be instructed to enforce the by-laws of the Board.

Dr. M.—Mr. John Burne, F.R.C.S., who met with a fatal accident while on his way to record his vote at Bath, was not a Fellow, as described in the *Times;* in fact, his name does not appear in either Register or Directory.

COMMUNICATIONS have been received from—

Dr. ROBERT SAUNDBY, Birmingham; Dr. WILLIAM FRASER, Aberdeen; Mr. WALTER W. REEVES, London; THE REGISTRAR OF APOTHECARIES' HALL, London; Dr. GEORGE WHYTE, Elgin; Mr. BALMANNO SQUIRE, London; THE SECRETARY OF THE ROYAL INSTITUTION, London; THE SECRETARY OF THE ANTHROPOLOGICAL SOCIETY; Dr. NORMAN CHEVERS, London; Dr. J. W. MOORE, Dublin; Dr. IRVING, Tunbridge Wells; Professor DE CHAUMONT, Netley; THE SECRETARY OF THE ROYAL SOCIETY OF ARTS; THE SECRETARY OF THE HARVEIAN SOCIETY; Dr. DIXON; THE SECRETARY OF THE EDINBURGH SCHOOL OF MEDICINE; THE HONORARY SECRETARY OF THE SOCIETY OF MEDICAL OFFICERS OF HEALTH; Dr. C. MEYMOTT TIDY, London; Dr. J. PEARSON IRVINE, London; THE SECRETARY OF THE MEDICAL SOCIETY OF LONDON; THE SECRETARY OF THE MEDICAL AND CHIRURGICAL SOCIETY; Mr. J. CHATTO, London; Mr. T. M. STONE, London.

BOOKS, ETC., RECEIVED—

On the Use of Water in the Treatment of Diseases of the Skin, by L. Duncan Bulkley, A.M., M.D.—New Method of Permanently Removing Superfluous Hairs, by L. Duncan Bulkley, A.M., M.D.—On the Nomenclature and Classification of Diseases of the Skin, by L. Duncan Bulkley, A.M., M.D.—Annual Report of the Brompton Provident Dispensary for 1879.—Weekly Return of Births and Deaths Registered in the Punjaub for the week ending January 31, 1880—Mittheilungen über die Pest-Epidemie im Winter 1878-79 im Russischen Gouvernement Astrachan—Potable Water, by Mr. Charles Ekin—Metric Record of Prescription and of Medical Observation.—Science Primers, by Professor Huxley, F.R.S.—Annals of the Anatomical and Surgical Society, by Charles Jewett, M.D., Brooklyn, N.Y.—Atlas of Histology, part xi., by E. Klein, M.D., F.R.S., and E. Noble Smith, L.R.C.P., M.R.C.S.—The Physiological and Pathological Relations of the Voice and Speech, by John Syer Bristowe, M.D. Lond., F.R.C.P.—Surgical Emergencies, by William Paul Swain, F.R.C.S.—Guide to Personal and Domestic Hygiene, by G. Wilson, M.A., M.D.—Notes on the Anatomical Relations of Uterine Structures, by T. H. Buckler, M.D.—On the Bile, Jaundice, and Bilious Diseases, by J. Wickham Legg, F.R.C.P.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Centralblatt für die Medicinischen Wissenschaften—Nature—Revue Médicale—Occasional Notes—Gazette Hebdomadaire—Louisville Medical News—Journal of Trinity College, London—Veterinarian—Edinburgh Medical Journal—Archives Générales de Médecine—Glasgow Medical Journal—Monthly Homœopathic Review—Dumfriesshire and Galloway Herald, March 31—Galveston Medical Journal—Electro-Metallurgist—Analyst—Therapeutic Gazette—Washington National Board of Health Bulletin—Practitioner—Birmingham Medical Review—Englishman (Calcutta), February 26, 27; March 1, 9, 11—Englishman's Saturday Evening Journal (Calcutta)—Weekly Return of Deaths Registered in the Punjaub during the week ending February 7, 1880.

APPOINTMENTS FOR THE WEEK.

April 10. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

Royal Institution, 3 p.m. Mr. James Sully, "Art and Vision."

12. *Monday*.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. Dr. Clement Godson will exhibit a specimen of Placenta Succenturia. Dr. T. Harrington Tuke will deliver an address "On the Lunacy Laws."

13. *Tuesday*.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Royal Institution, 3 p.m. Prof. Huxley, "On Dogs, and the Problems connected with them."

Anthropological Institute, 8 p.m. Rev. Lorimer Fison, "Notes on Fijian Burial Customs." Mr. C. Staniland Wake, "Notes on the Polynesian Race."

Royal Medical and Chirurgical Society (Ballot, 8 p.m.), 8½ p.m. Dr. Gilbart Smith and Mr. Walsham, "On a Case of Extreme Pharyngeal Stenosis, the result of Syphilis." Dr. E. C. Anderson, "On the Partial Metabolism by the Liver of Leucin and Tyrosin into Urea."

14. *Wednesday*.

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Lister), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.; National Orthopædic, Great Portland-street, 10 a.m.

Royal Microscopical Society, 8 p.m. Dr. M. C. Cooke, "On the Genus Ravenelia." G. Hoggan, M.B., and F. E. Hoggan, M.D., "On the Development and Retrogression of Bloodvessels." Mr. A. Grunow, "On some New Species of Netzschia." Mr. W. Webb, "A New Fender."

15. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

Royal Institution, 3 p.m. Prof. Tyndall, "Light as a Mode of Motion: Theories of Light and Colours."

Harveian Society, 8½ p.m. Mr. Teevan, "Points in the Surgery of the Urinary Organs which every practitioner ought to know." Mr. Henry Power, "On the Affections of the Eye in Connexion with Pregnancy."

16. *Friday*.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

Society of Medical Officers of Health, 7½ p.m. Mr. A. Wynter Blyth, "On the Prevention and Propagation of Diphtheria." Dr. Alfred Hill, "On Diphtheria and Typhoid, and their Concomitant Conditions in Birmingham."

Royal Institution (Council Meeting, 8 p.m.), 9 p.m. M. Ernest Renan, "Marcus Aurelius."

VITAL STATISTICS OF LONDON.

Week ending Saturday, April 3, 1880.

BIRTHS.

Births of Boys, 1279; Girls, 1213; Total, 2492.
Corrected average in the 10 years 1870-79, 2549·1.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	909	823	1732
Average of the ten years 1870-79, corrected to increased population	927·5	912·0	1839·5
Deaths of people aged 80 and upwards ...	...	...	68

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa
West	561359	...	7	6	1	21	...	1	...	2
North ...	751729	4	4	16	5	38	...	1	...	1
Central ...	334369	...	1	3	...	12	1	...	...	...
East	639111	2	6	5	1	15	1	1	...	5
South	967692	3	6	29	4	58	...	4	1	3
Total	3254260	9	24	59	11	142	2	7	1	11

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·595 in.
Mean temperature	44·9°
Highest point of thermometer	62·4°
Lowest point of thermometer	27·4°
Mean dew-point temperature	40·1°
General direction of wind	Variable.
Whole amount of rain in the week	0·54 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, April 3, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1880.*	Persons to an Acre. (1880.)	Births Registered during the week ending April 3.	Deaths Registered during the week ending April 3.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3664149	48·6	2492	1732	62·4	27·4	44·9	7·17	0·54	1·37
Brighton	107321	45·6	77	51	55·0	31·0	42·2	5·67	0·72	1·83
Portsmouth ...	134224	29·9	74	37	...	...	...	...	...	...
Norwich	85827	11·5	43	40	58·8	30·0	45·2	7·33	0·74	1·88
Plymouth	74993	53·8	53	49	59·2	28·7	45·4	7·44	0·85	2·16
Bristol	213536	48·0	118	95	59·4	29·7	44·8	7·12	0·64	1·63
Wolverhampton ...	75970	22·4	56	27	59·8	29·2	42·9	6·06	1·00	2·54
Birmingham ...	394738	47·0	298	179	...	...	...	...	...	...
Leicester	129912	40·6	77	58	60·8	32·0	46·1	7·84	0·88	2·24
Nottingham ...	173627	17·4	114	118	63·7	27·4	44·9	7·17	0·95	2·41
Liverpool	544056	104·4	402	284	...	...	...	...	...	...
Manchester ...	363130	84·6	234	221	...	...	...	...	...	...
Salford	185786	35·9	138	105	...	...	...	...	...	...
Oldham	115413	24·7	63	66	...	...	...	...	...	...
Bradford	197196	27·3	103	74	54·8	34·0	43·6	6·45	1·00	2·54
Leeds	318929	14·8	213	126	53·0	35·0	41·6	5·34	1·06	2·69
Sheffield	304938	15·5	204	118	61·0	33·0	44·2	6·78	0·24	0·61
Hull	149627	41·2	104	84	61·0	31·0	43·8	6·56	1·22	3·10
Sunderland ...	116730	42·2	87	50	62·0	34·0	45·3	7·39	1·02	2·59
Newcastle-on-Tyne	149366	27·8	127	64	...	...	...	...	...	...
Edinburgh	229839	54·8	165	119	57·0	28·8	45·8	7·67	0·39	0·99
Glasgow	589598	97·7	439	312	...	...	...	...	...	...
Dublin	314666	31·3	228	259	58·6	27·3	46·3	7·95	0·32	0·81
Total of 23 Towns in United Kingdom	8633571	39·2	5909	4268	63·7	27·3	44·5	6·95	0·77	1·96

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·60 in. The highest reading was 30·04 in. on Sunday morning, and the lowest 29·16 in. on Wednesday evening.

* The figures for the English and Scottish towns (except for Nottingham, Salford, and Oldham) are the numbers enumerated in April, 1871, raised to the middle of 1880 by the addition of nine years and a quarter's increase, calculated at the rate which prevailed between 1861 and 1871. Revised estimates have been adopted for Nottingham, Salford, and Oldham, based upon special returns of inhabited houses existing within those boroughs. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

THE GULSTONIAN LECTURES.
ON EPILEPSY.

Delivered before the Royal College of Physicians.

By W. R. GOWERS, M.D., F.R.C.P.,
Senior Assistant-Physician to University College Hospital, Physician to the National Hospital for the Paralysed and Epileptic.

Lecture III.—Part I.

Mr. President and Gentlemen,—The aid which, during the last twenty years, the microscope has afforded in the investigation of the morbid anatomy of diseases of the nervous system has thrown little if any light on the pathology of idiopathic epilepsy. Neither the observations of Schrœder van der Kolk on the size of the vessels of the medulla oblongata, nor the changes which have been described by Meynert in the cornu Ammonis, can, I think, be accepted as having any real significance. In the cases I have had an opportunity of examining, the cornu Ammonis has presented no pathological change; while in two cases in which I have met with disease of this structure the patients had never suffered from convulsion. In considering, therefore, the pathology of epilepsy, we must seek for other evidence than that afforded by the pathological anatomy of the idiopathic disease, and draw our inferences from the morbid changes in organic disease attended by convulsion, and from the facts furnished by experiment and by the clinical study of the disease.

It may, in the first place, be assumed as not needing proof that the muscular spasm, which constitutes the most conspicuous feature of the attack, is due to the sudden violent action of nerve-cells—*i.e.*, to the "discharge" of grey matter; and that the sensations which the patient experiences before losing consciousness are due, directly or indirectly, to the same cause—to the commencement of the discharge. To prevent misconception, I may say that the word "discharge" is used in the sense in which it has been employed by Dr. Hughlings-Jackson and others, as a short expression for the sudden liberation of nerve-force, without any theory as to the form of physical or vital force thus liberated.

Premising this, the subject of the pathology of epilepsy resolves itself, in the main, into four questions: What is the seat of the discharge which thus produces the symptoms of the fit? Is the seat of the discharge the seat of the disease? How far does such discharge explain all the symptoms of the attacks? What is the nature of the morbid change which causes the discharge? Perhaps to no one of these questions can a conclusive answer be given. Nevertheless, these are facts which indicate the direction in which an answer is to be sought, and, what is equally important, the direction in which we must not seek it too exclusively.

What is the seat of the primary discharge? What grey matter is it which thus suddenly stimulates the nerve fibres and the muscles? It is hardly necessary to remark that the spinal cord acts only as a conductor, and that the over-acting grey matter is to be sought for above it, within the skull. Regarding the encephalic masses, we have two classes of facts. First, that there exists in the medulla oblongata, adjacent to the centres which regulate the respiratory movements and the state of the vessels, structures capable of giving rise by their action to general convulsions, the "convulsive centre" of Nothnagel. On the other hand, of all regional diseases of the brain, lesions of the convolutions stand incomparably first as a cause of convulsions, and experiment also demonstrates that irritation of the cortex in the motor region has the same effect. The teaching of experiment, then, is that both the cortex and the medulla may originate convulsions. The teaching of pathology is, as Dr. Wilks long ago insisted, that epileptiform convulsions have, in most cases, their origin at the surface of the brain. It may be doubted, however, whether the pathological facts alone, or in conjunction with experiment, quite warrant the conclusion that epilepsy is a disease of the convolutions. Burdon-Sanderson's researches make it probable that the convulsions which occur when the surface is irritated may depend on the discharge of motor centres more deeply seated, though connected with, and excitable from, the surface regions. So far as pathology and experiment go, these deeper structures, at the level of the corpus striatum, or perhaps lower still, may be the parts which discharge in epilepsy. The fact that lesions in certain regions of the convolutions cause convulsions beginning in certain parts, as the arm or the leg, is not incompatible with this view, since discharges beginning in the lower centres may have quite the same definite forms as when they are excited from the surface. Physiological considerations make it probable that the arrangement of represented movements in the lower centres is on the same plan as in the higher. Nor does the affection of consciousness afford valid ground for the assumption that epilepsy is a disease of the cortex, since those who believe that the discharge originates in the medulla find an explanation of the loss of consciousness by assuming an extension of the discharge to the vaso-motor centre, causing arterial spasm throughout the brain. Even if we admit for a moment that there is no proof of arterial spasm, and that the over-action of motor grey matter is the only certain element in the convulsions, such over-action may disturb the centres above as well as the centres below, and, as Dr. Robertson of Glasgow has suggested, the loss of consciousness may be the effect of an upward discharge, just as the muscular spasm is the effect of the downward discharge. Thus, neither pathology nor experiment enables us to exclude the lower encephalic centres as the seat of the primary discharge in epilepsy; and in the light of all known pathological and experimental facts, the latest writer of a systematic account of the disease, Nothnagel, can see no reason to modify the conclusion that the primary seat of the discharge—the seat of the disease—is the convulsive centre in the medulla oblongata.

Pathology and experiment, then, fail to take us farther towards a definite conclusion, but from clinical observation we may gain other important information. At this point the study of the modes of onset of convulsions becomes of the highest value. The commencement in the limbs helps us but little, because, as I have said, movements in the lower centres are probably differentiated, if not as much, yet on the same plan as in the convolutions. But it is different when the auræ referred to the special senses, or consisting in mental processes. We have seen that, of all the fits which begin so deliberately as to allow the patients to be conscious of the onset, a special-sense warning is present in a fifth—that is, the discharge, as far as we can ascertain, commences in a special-sense centre. But these centres are certainly situated within the hemispheres, above the pons, and far above the "convulsive centre." Hence the conclusion seems inevitable that the discharge in such cases originates in the hemispheres. It is equally clear that an attack which begins with an intellectual aura, an idea, cannot commence with a discharge in the medulla oblongata. Such an attack we can only conceive as commencing in the highest of all the cerebral centres, that which constitutes, to use the phrase made current by Spencer and Jackson, the anatomical substratum of intellectual processes.

We may therefore conclude that the teaching of pathology, if inconclusive alone, is right in its indications, and that in at least a large number of epileptic attacks the process of the fit commences in the cerebral hemispheres, and that in many it commences in high centres. If this is true, the question arises, Are we not justified in regarding all fits as due to changes in the hemispheres? Are there any facts to indicate that the lower centres of the pons and medulla are ever the primary seat of the discharge in idiopathic epilepsy.

It is certain that convulsions may arise from these lower centres, since they may still be produced in animals after the removal of the cerebral hemispheres. Moreover, in man, convulsions are caused, in rare cases, by diseases of the pons and medulla. But the clinical facts to suggest that they ever commence in this situation in idiopathic epilepsy are, it must be confessed, scanty. Does the study of modes of onset help us in this particular? There is one group of auræ which may be regarded as supporting the view that the fits which they initiate take origin in the medulla. I refer to those which I have grouped as the pneumogastric auræ,

consisting of epigastric sensations rising to the throat, choking, dyspnœa, palpitation. We know that the pneumogastric nucleus and respiratory centres are in close proximity to, and connexion with, the convulsive centre, and it is readily conceivable that a commencing discharge in this situation may lead to disturbance of the respiratory and pneumogastric centres before it causes general convulsions. But on this point other facts must be taken into consideration. The phenomena of conscious sensation make it certain that the whole body is represented in the cerebral hemispheres. It is conceivable that when a discharge originates in certain parts of the hemispheres, the central structures connected with the vagus or representing the respiratory processes, may be the seat of the first discharge, or may, at least, be the most sensitive to the commencing disturbance, and be the channel through which the consciousness is first impressed. We must remember, as we saw in the first lecture, and as Dr. Hughlings-Jackson has pointed out, that these central representatives of the vagus are the most readily disturbed in emotion, such as fear. Thus the early affection of these centres, which we have just considered to be possible in a discharge originating in the medulla, is equally possible in a discharge originating higher up. Much weight cannot, therefore, be placed on the pneumogastric aura, as evidence that the discharge originates in the medulla. This conclusion is supported by cases which show that this aura is sometimes felt in attacks which certainly commence in the hemispheres. As was stated in the last lecture, this pneumogastric aura may be associated with special-sense warnings even of high elaboration, and an instance of this is the case which I related at length.

We are probably not justified in concluding that attacks never arise in the medulla. The extremely varied character of auræ, referred as they are to every part of the organism, shows that the discharge may commence in any part of a very wide region, perhaps the whole of the brain in which sensori-motor processes are represented. The cases are, however, very few which afford any clinical evidence that the discharge commences in the medulla. It is possible that, in cases of reflex convulsions, the process occurs in this situation. Almost the only example of idiopathic epilepsy which has come under my notice, in which the symptoms suggested that the discharge originated in the medulla, was a patient of my colleague, Dr. Ramskill, who kindly permits me to mention the case. A lad, fourteen years of age, had been subject to epileptic attacks for two years, when he gradually lost all power in his arms and legs, and even his neck was weak. In this condition passive movements of the trunk, slight flexion of the spine, invariably caused a severe epileptic fit, attended by loss of consciousness. Under treatment, especially ice to the neck, he steadily improved, and passive movement would no longer cause a fit, but for a long time slight attacks occurred whenever, after being still, he exerted himself. Although there was no epileptogenic zone, the attacks remind us of Brown-Séquard's epileptic guinea-pigs, in which the convulsions certainly did not originate above the pons.

The conclusion, then, is that the convulsions in idiopathic epilepsy may, as Dr. Hughlings-Jackson has urged, be due to the discharge of any of the grey matter of the encephalon, which subserves sensori-motor processes. This brings us, however, to the second question, Is the seat of the primary discharge the seat of the disease? If, by such discharge, all the symptoms can be accounted for, we have no *need* to go further, and the theory that any other pathological process underlies the phenomena must rest upon its independent evidence. To learn, therefore, whether the seat of the discharge can be regarded as the seat of the disease, we must consider, first, whether there are any symptoms for which the discharge of grey matter, which causes the aura and the convulsion, cannot account; and, secondly, whether there is direct evidence of any other pathological process.

It has been supposed that the motor discharge, especially if it occur in a low centre, will not account for the loss of consciousness. We may doubt whether this assumption is justifiable with regard to any part of the brain, even to the medulla oblongata. Any small lesion of the brain, in almost any part, will cause transient loss of consciousness. All parts of the brain are intimately connected; the whole must be sensitive to a change in any one part. The maintenance of consciousness is its highest function, the first to be interfered with by any disturbance, such as results from a discharge. If the discharge originates in some cases in the lower centres, its upward effect may, as already suggested, cause a disturbance in the highest centres with which consciousness in is incompatible. For the attacks characterised by loss of consciousness only, the theory held by Dr. Hughlings-Jackson, that they consist in a discharge in or affecting the highest centres only, seems an adequate explanation, and is rendered probable by the fact that such attacks are often attended by sensations of a highly specialised character. In the case of the lower centres, it seems possible that a *slight* discharge in some situations may affect the centres above, and not the centres below—may impair consciousness, and not cause convulsion.

Thus it seems unnecessary, for the explanation of loss of consciousness, to assume the occurrence of any other pathological process than the discharge which causes the convulsive phenomena. As far as I am aware, the only other symptom which may be held to indicate that there is more than this discharge is the pallor of face which is sometimes conspicuous. But the peripheral vaso-motor nerves are known to be influenced, in a very ready way, by the stimulation of other nerve-structures. That pallor of face may *result* from cerebral action is proved by the effect of emotion, whatever be the mechanism by which that effect is produced. An injury to the brain of a frog will cause the arteries even of the foot to contract. Hence it is readily intelligible, and even probable, that pallor of face may be an *effect* of the discharge which causes the convulsion.

If then it is unnecessary, in order to explain all the symptoms of attacks of epilepsy, to go beyond the discharge of which we have certain evidence, we must ask what direct evidence there is of the occurrence of any other morbid process. According to current theory, another element plays an important part in producing the phenomena of attacks—vaso-motor spasm. It has been held that the discharge itself, though originating in the hemispheres, is due to vaso-motor spasm affecting particular arteries, and exciting the action by causing local cerebral anæmia. This view, which regards epilepsy as simply a disease of the vaso-motor centre in the medulla, is now held by few. It is unnecessary to discuss it separately, since the evidence on which it rests will be considered in speaking of the second view, much more widely held, that although the convulsion depends on the discharge of motor centres, the loss of consciousness is due to arterial spasm. A third theory of vaso-motor influence is that put forward by Dr. Hughlings-Jackson, that the local discharge in the brain excites, at the spot, arterial contraction, and that this determines the *spread* of the discharge.

What, then, is the direct evidence that vaso-motor spasm in the brain causes loss of consciousness, or any of the symptoms of the attacks? The evidence may be put, if somewhat baldly, yet I think accurately, thus:—Epileptic attacks are accompanied, at the onset, by pallor of face. Pallor—that is, anæmia—of face is evidence of anæmia of brain. Anæmia of brain will cause loss of consciousness and general convulsions. Therefore, loss of consciousness in epilepsy is due to anæmia of brain, the result of vaso-motor spasm; and, some would add, the convulsions themselves are due to the same cause.

The gaps between several of the steps of this reasoning will doubtless seem to many of you, as they do to me, considerable. But the first two statements are themselves of doubtful truth. I pointed out in the last lecture that epileptic attacks are often accompanied by no pallor of face, and this is true most conspicuously of many attacks of *petit mal*. I am convinced of this from my own observation, and I think I may quote, in support of it, the statement of Dr. Radcliffe, that the initial pallor is "often difficult to catch." Further, the assumption that pallor—*i.e.*, vaso-motor spasm—of the face is necessary evidence of vaso-motor spasm in the brain seems scarcely justifiable. Surface vessels have no necessary correspondence in their condition with those of deeper structures. We do not infer that the brain is congested whenever the face blushes, and why should we assume that the brain becomes anæmic whenever the face becomes pale? We have seen that it is conceivable, and even probable, that the discharge in the brain may cause a reflex contraction of the peripheral vessels. In cases in which the pallor of face is apparently the result of cardiac failure, it is probable that this is the effect of the com-

mencing discharge, and not its cause. Convulsion is not part of the ordinary phenomena of cardiac syncope. On the other hand, as the discharge often impresses the consciousness first through the pneumogastric centres, it is probable that it may in such cases influence the periphery first by the same channel. That such cardiac failure is not the *ordinary* cause of loss of consciousness in epilepsy a very small amount of clinical observation will demonstrate, since such loss of consciousness may occur without either failure of the pulse or pallor of the face.

Thus between the fact that profound anæmia of the brain and medulla oblongata will cause both loss of consciousness and convulsion, and the theory that these are commonly so caused in epilepsy, there is a gulf over which no bridge has yet been placed. No connecting facts have been adduced which are not susceptible of other and better explanations. It is a gulf, moreover, which is widened by every addition to our knowledge of the clinical history of the disease.

One vaso-motor theory remains for discussion—that which assumes that a local discharge on the brain excites, at the spot, reflex vaso-motor spasm, and that this determines the spread of the discharge. This theory, I would venture to suggest, is scarcely warranted by known facts, or needed to explain them. It is unneeded, because the anatomical relations of known centres already afford us the means of explaining many facts in the progress of auræ, and justify us in the belief that the explanation of the others, still mysterious, will be found in the relations of the unknown centres, and especially, as stated in the last lecture, of those which subserve sensation. The theory seems scarcely warranted, because in all organs, as far as we know, functional activity causes reflex dilatation, not contraction, of their vessels; and the experiments of Ferrier have proved that this is as true in the brain as elsewhere.

One other point on the current theory of epilepsy may be briefly noticed—that which refers the final clonic spasm to a cause different from that which excites the initial tonic spasm. The clonic spasm is ascribed to the irritation of the medulla by the venous blood. It was, however, pointed out in the first lecture that there is no abrupt transition from the one form of spasm to the other. The clonic spasm is developed by interruptions in the tonic spasm, and as the fit ceases the muscular contractions do not become slighter, but less frequent. The clonic stage certainly corresponds to the cyanosis which results from interference with respiration, but if we recognise the continuity of the tonic and clonic spasm, we can hardly attribute the two to totally different causes. Observation of fits suggests, I think, that the venous congestion does produce the clonic spasm, not, however, by direct excitation, but by interrupting and ultimately arresting the spasm which before existed. I think that the fixation of the chest in an epileptic fit simply does in an intense manner that which we do in a slighter manner when we arrest an hysterical convulsion by closing the mouth and nose. There is nothing inconsistent in a certain degree of anoxæmia arresting spasm, and a more profound degree, as in actual asphyxia, exciting it. Analogous difference is seen in the action of many stimuli. The view that the tonic spasm is only clonic spasm compressed, that the clonic spasm is only the tonic spasm spread out, is supported by the fact that in attacks which begin slowly the slight initial spasm is almost always clonic, and as the discharge spreads and becomes more intense the spasm becomes tonic. In partial epileptiform seizures the spasm is usually clonic throughout.

The conclusion, then, is that all the phenomena of the fits of idiopathic epilepsy may be explained by the discharge of grey matter; that the hypothesis of vascular spasm is as unneeded as it is unproved; that there are no facts to warrrant us in seeking the seat of the disease elsewhere than in the grey matter in which the discharge commences; that this is in most cases within the cerebral hemispheres, although possibly in some instances lower down in the medulla oblongata; that epilepsy is thus a disease of grey matter, and has not any uniform seat. It is a disease of tissue, not of structure.

The last question is, What is the nature of the tissue change? Can we form any opinion as to the character of the alteration in the grey matter which permits its sudden, explosive discharge? This problem is essentially the same, whatever theory of epilepsy is adopted. The violent muscular contractions suggest a corresponding over-action of the nerve-cells, and it has seemed to some, as Dr. Hughlings-Jackson, that such repeated over-action can hardly be other than an indication of increased functional activity—of increased, if abnormal, nutrition. On the other hand, others, and foremost among them is Dr. Radcliffe, have maintained that the general conditions of epileptics and the phenomena of epilepsy suggest impairment of functional power, and that a symptom so abnormal as an epileptic fit can hardly result from normal nutrition, to whatever excess it may be carried.

Modern physiology teaches us, I think, in what direction an answer is to be sought. It is necessary, in the first place, to avoid too direct an inference from the outward manifestation to the internal process. No one probably now imagines that the nerve-force which sets a muscle in action forms part of the force liberated by the muscle; and, although the two are no doubt proportioned, the difference between them may be as great as between the energy liberated by an electrical spark and by a charge of gunpowder which it fires. We may easily overrate the amount of nerve-force needed to cause violent muscular action, and may also overrate the relation which the nerve-force bears to the potential energy of the cells concerned.

Every nerve-cell may be described as a store-house of latent energy, and may be compared, by analogy, to a charged Leyden jar, or, what is more convenient for our present purpose, to a bent spring. The energy of the spring is due to the force which has bent it, and depends on the resistance which keeps it bent. The recognition of the resistance to action in nerve-cells, and of the part which it plays in normal processes, is a most important step in modern physiological thought. Of the nature of the resistance we can form perhaps no idea, but its existence in nerve-cells may be taken as hardly needing proof, for we are unable to conceive of their action without it, and the idea has underlain such expressions as "nerve-tension," and the like, which have been long employed. The fact is probably only the highest instance of a series of relations which runs through the whole of organic nature. The formation of every organic compound, for instance, consists in, so to speak, the bending back of the spring of chemical affinity in a process by which force is held latent by some unknown resistance.

The application of this mode of thought to the morbid action of the nervous system promises to yield clearer views of many problems of disease, and for this step we are chiefly indebted to some important and suggestive papers by Dr. Ringer. The state of a nerve-cell, whether at rest or in action, may be regarded as depending on the proportion which its tendency to liberate energy bears to the resistance within it. The action of a nerve-cell may depend on the production of force within it being increased, in excess of the resistance, or on the resistance being unduly lessened. The cessation of its action may depend on the tendency to liberate energy being diminished, or on the resistance being increased. It is highly probable that all the phenomena of "inhibition" depend on increase of resistance by the action of one cell upon another. It is, indeed, conceivable that the interaction of the nerve-cells of the brain may be such that their mutual influence is a balanced resistance, and the amount of force in the brain, nascent but restrained, may be infinitely greater than any manifestations of energy which we perceive could possibly suggest. We may, perhaps, ultimately learn to regard the effect of stimuli in developing nerve-action, not after the analogy of the mechanism of a piano, each blow upon a key directly exciting the sound, but rather after that of an organ, in which the movement of a key merely lessens the resistance to the action of a pent-up force.

Do not, I would ask, the phenomena of epilepsy best accord with the theory that the unstable equilibrium of grey matter depends on instability of resistance rather than on any primary change in the energy-producing action of the cells? When loss of blood developes general convulsions, by its action on an otherwise healthy nerve-centre, can we conceive, I would ask, as Dr. Radcliffe has asked before, that it acts by increasing the production of nerve-force? It appears far more intelligible to regard its effect as a sudden diminution of resistance, by which the pent-up nerve-force is suddenly released, the nascent energy developed. The arrest, by the ligature, of fits which begin deliberately seems to point in the same direction. A strong peripheral

impression causes such a change in the grey matter to when the discharge is advancing, that the discharge is arrested there, and passes no further. We can hardly conceive the effect of the impression except as causing a local increase of resistance, so that the liberation of energy ceases at the spot, can no longer occur. Once arrested in this way, it is arrested for a considerable time. If the discharge depended on a primary increase in the energy-producing action of the cells, we should expect it to recur when the ligature was removed. It does not. I have a patient who has, for a long time, arrested every fit, commencing in the hand, by a ligature above the elbow. At first, if he did not apply the ligature, the attack went on into a general convulsion. He now finds that the sensation, beginning as before, stops, of its own accord, at the spot at which the ligature used to be applied, and never goes on to a fit. According to the view I have suggested, the repeated increase of resistance has led to a corresponding permanent change, resting on an alteration of nutrition, so that the unstable grey matter is limited by a zone of greater stability, where the discharge is arrested.(a)

Analogy suggests that the internal resistance to action is a higher function of the nerve-cells than the mere transformation of energy. The control is a higher function than the production of the force. Hence the fact that there is an apparent over-action becomes consistent with the theory that there is imperfect nutrition.

The discussion of the real nature of these influences—the liberation of energy, and the resistance to action—how far they are ultimately to be referred to vital, chemical, or electrical changes, is beyond the scope of these lectures. The recognition of one point only appears to me essential—that nutritive changes may underlie them, and that from them nutritive changes may result.

Two other points in pathology remain for mention. I have suggested that failure in resistance, permitting the liberation of energy, constitutes the essential element in discharge, and that such discharge causes the symptoms of the epileptic paroxysm. Physiological considerations make it probable that the resistance in cells may be raised and lowered by the action of cells at a distance. There are a few phenomena of minor attacks of epilepsy which seem best explicable by assuming that the resistance in a centre is suddenly raised (perhaps by the action of other cells) instead of being lowered. A patient, for instance, whose severe fits affect one side only, may have slight attacks which consist only of sudden transient weakness in the side, probably due to an increased resistance in the centres, which, in other attacks, are discharged. We have seen that while visual sensations, due hypothetically to discharges in the visual centres, are frequent warnings, sudden inability to see may also be part of an aura, and such inability to see must be regarded as a sudden inhibition of the visual centre, that is, a sudden increase of resistance within it. A slight increase of resistance affords the best explanation of the apparent diminution in the size of objects. The increase of resistance is equivalent to a diminution in the sensitiveness of the centre, and the effect upon it of the stimulation of a given area of the retina is less than normal, and corresponds to the effect of a similar stimulation of a smaller retinal area. The object appears smaller and farther off, and as the resistance in the centre increases, the object may appear to recede. It is the opposite process to that which occurs in lessened resistance in the centre. This commonly results in such liberation of energy as affects consciousness. There is a visual impression, perhaps a sense of a ball of fire; and as the discharge spreads this seems to get larger and larger. The effect is the same as if an increasingly large area of the retina were stimulated. There is one centre which is usually inhibited, rather than discharged, in epilepsy—the centre for the motor processes of speech.

The phenomena of hystero-epilepsy seem to point to an instability of grey matter of different seat and perhaps different kind. The excessive violence of the muscular spasm in that disease is comparable only to the convulsions of epilepsy and tetanus. The phenomena appear due to the more deliberate and sustained over-action of centres which are concerned in specialised, co-ordinated movements, in emotions, and also in intellectual processes. The fact that some patients in these attacks fall suddenly, and remain still for a few moments before the co-ordinated movements commence, has been regarded by Dr. Hughlings-Jackson (adopting a theory of the late Dr. Dickson) as evidence that the "co-ordinated" phenomena are always due to the release of lower centres from the control of the higher by the temporary discharge of the latter. He has urged that an actual discharge of grey matter can only give rise to inco-ordinate "brutal" effects. That co-ordinated convulsive action may succeed attacks of true epilepsy, is beyond all question; but it is also, I think, beyond question that the co-ordinated phenomena are not always preceded by epileptic symptoms. In some cases which I have watched, the attacks commenced with the co-ordinated movements which characterised them throughout. The tonic rigidity, which initiates the attacks in other cases, cannot be regarded as a true epileptic symptom; it is rather part of the hystero-epileptic attack, and may recur during its course. Thus I think that there is in many cases no evidence of true epileptic symptoms, that the co-ordinated convulsion, which constitutes the chief symptom of the hystero-epileptic attack, may exist alone.

Even for the cases in which this symptom succeeds a true epileptic seizure, it may be doubted whether the hypothesis of "loss of control" affords an entirely adequate explanation. We can discern no difference between epileptiform attacks which are, and those which are not, followed by such symptoms. This suggests that their occurrence depends upon some other condition, a condition pertaining to the nervous organisation of the individual, and not to the form of attack. This is supported by the fact that cases, in which epileptic attacks are succeeded by "co-ordinated convulsions," present (as we saw in the first lecture) distinct characteristics in age, sex, causation, and conditions under which the fit occurs. In these respects they resemble the patients in whom such attacks of hysteroid character occur without any preceding epileptoid symptoms. These facts make it probable that there is in these epileptics, in addition to the instability of nerve-tissue which causes epilepsy, also the instability, whatever it may be, which gives rise to hysteroid attacks. "Loss of control" may be the immediate mechanism by which this instability is thrown into operation, but will not alone account for its existence, and is no necessary condition for its manifestation. Nevertheless, in some patients the hysteroid tendency may be so slight that it never manifests itself spontaneously—never except during the post-epileptic state. Hence I think that the old conclusion is the true one; that all patients who present these co-ordinated convulsions after epileptic attacks are really the subjects of both epilepsy and hysteria. The existence of the epileptic symptoms may be obvious, or may be most difficult to detect; initial simple tonic spasm cannot be regarded as evidence of their existence, and it may be practically impossible to say, in many cases, without the rare opportunity of witnessing the onset of the attacks, whether there is or is not an initial truly epileptiform seizure. This is the explanation of a point in the method of these lectures which may have occasioned surprise; while endeavouring to distinguish the two diseases, I have not ventured to separate them. Such a separation I believe to be practically impossible; to attempt it would entail an error, the amount of which would be unknown, and certainly large. I have therefore considered each fact with regard to the entire series; endeavouring to ascertain, however, the extent to which it is true of the cases with, and those without, hystero-epileptic or co-ordinated convulsion. The former term, "hystero-epileptic," has been employed in its popular meaning, without reference to theory, as a designation for the severer forms of hysteroid attack, in which their violence, severity, and recurrence bring them practically nearer to the disease which we call "epilepsy" than to that which we designate "hysteria." I cannot but think that it would be a gain if we were to discard the dubious word "hysteria," even in its modifications, as a designation for such attacks, and call them simply "co-ordinated convulsions."

Such forms of attck, in which the convulsive phenomena are violent in degree and disorderly in sequence, are in the lowest grade of co-ordinated phenomena, while the highest are those forms of involuntary action which we call

(a) That variations in tissue-resistance may influence the *spread* of a discharge which has already commenced has been recognised by Dr. Hughlings-Jackson. (*Brit. Med. Jour.*, January 11, 1879.)

automatic. In these, complex actions are performed, sometimes with considerable skill, of which the patient is subsequently entirely unconscious. Dr. Hughlings-Jackson has long maintained that these are really post-epileptic phenomena. That they are commonly such, all must, I think, agree. The older view was that these were true epileptic events, the result of such changes in the brain as might, in another degree or part, constitute an ordinary epileptic attack. While recognising that they are commonly post-epileptic, I doubt whether the older view must be entirely discarded. Many of the phenomena mentioned in the first lecture may make us hesitate to assent to the conclusion that the discharge of epilepsy must always cause inco-ordinate symptoms. What, for instance, is the vision of an old woman making ugly faces, which one patient had sometimes as the aura of a fit, sometimes as an attack of *petit mal*, but an automatic action of—a co-ordinate discharge in—the centre for visual ideas? The remarkable aura which I detailed at length suggests the same explanation, and so do many others that were alluded to. I have seen a patient suddenly, while being watched, without the slightest pallor, hesitation, or any symptom to indicate a previous discharge, proceed to empty his pockets, take off his coat, or to some action which in him characterised, and I think constituted, his attacks of minor epilepsy. With regard to the attacks of post-epileptic automatism, the same difficulties face us as in the case of the co-ordinated convulsion. We have the facts that in one individual attacks may always be followed by automatic action; and in another, similar attacks may never be so followed. This suggests that there is, underlying the phenomenon, a condition of the centres on which it depends. Were it not for this condition the epileptic attack would not lead to it, and this condition may, in rare cases, cause its primary manifestation.

Children's Chairs.—M. Javal (*Gaz. Hebdom.*, March 26) called the attention of the Société de Biologie to the little attention that is paid in families to the height of the chairs of children. There is no medium between a chair of fifty-seven centimetres for infants and one of forty-five for adults, while in schools there is a series of six intermediate sizes. This negligence has a bad effect upon the vision, as no account is taken of the distance which separates the eye from the objects placed on the reading-table. The chairs should be lower in proportion as the children grow.

Hyoscyamia in Insanity.—Dr. Gray, Superintendent of the New York State Lunatic Asylum, states (*Boston Medical Journal*, February 26) that the trials which have been made of this substance have been attended with good results. "In cases of acute mania and melancholia with frenzy, no remedy we have used has so efficiently and readily calmed the high nervous and muscular excitement, and brought about a degree of tranquillity essential to acquiescence in nourishment and rest as a means of restoration." It was also found of great value in controlling the cerebral excitement of certain cases where there was persistent refusal of food, as it made it reasonably easy and entirely safe to introduce the stomach-tube and administer the necessary food. It is in general sufficient to give it once or twice a day, or once during the day and once at night, for a few days, and then intermit its employment. "One might say, to see a patient while moderately under its influence so much more comfortable, that it simply breaks up the habits of restlessness, tearing, etc. Perhaps this is a sufficient explanation; but I am inclined to think that it produces an effect of a beneficial character upon the cerebral nerve-tissue, quieting the irritable and excited brain quite as markedly as preparations of opium will relieve pain. At all events, we have found it very useful as a medicine, and that, discriminately used, it aids in the comfort and restoration of the patient, while in no instance has it proved harmful. I have found it beneficial in cases of hysteria and chorea." In its crystallised form hyoscyamia is given in doses of from one-eighth to one-half a grain, and in its crude form in doses reaching a grain. In simple restlessness from cerebral irritability, and in certain hysterical affections, the sixtieth to the thirtieth of a grain of the crystals is prescribed. It has also been given in conjunction with morphia, as—℞. Morph. bromid. gr. iv.; ext. nuc. vom., piperin., āā. gr. viij.; hyoscyam. (cryst.) gr. iij.—m. ft. pil. xxx.

ORIGINAL COMMUNICATIONS.

ON THE ENDEMIC CONTINUED FEVERS OF SUB-TROPICAL LATITUDES.(a)

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The title of my paper of course broadly indicates its scope; but as that opens up a wide field of doubt and controversy, it is necessary to begin by explaining the special points upon which I wish to engage your attention.

The first question obviously is, What do I mean by the endemic continued fevers of sub-tropical latitudes? Now, I am not about to essay the impossible task of attempting in a short paper any widely comprehensive survey or scientific classification of these fevers; only the more salient points can be touched upon. I intend to follow merely the arrangement and nomenclature of the Army Medical Blue Book—not that it is a strictly scientific classification probably, but wholly and solely because these returns afford us data nowhere else to be found.

The continued group of fevers in the Blue Book may be taken to include only—1. Febricula (all forms); 2. Simple continued fever; 3. Enteric or typhoid fever.

True typhus we may exclude, from its fortunate rarity nowadays; yellow fever also, because it has a heading to itself; and likewise the exanthemata wholly, and the purely paroxysmal or malarial, although the latter often complicate and produce hybrid forms with the continued fevers.

To a consideration of the above three forms I will limit myself, and endeavour to expound what seems to be their mutual relationship and etiological affinities.

The second question naturally is, What do I mean by sub-tropical? The term is more a geographical expression than anything else. It just means those belts of the earth's surface which, while tropical in summer, are more or less temperate in winter. Although, broadly speaking, they lie between the twentieth and fortieth parallels of latitude, north and south, they do not follow the rigid geographical lines, but more strictly the isothermal, or isotheral, which indicate the areas of like summer temperature. It is temperature that determines the true sub-tropics, whether of animal or vegetable life or of disease; and especially is summer-heat the chief factor in the genesis and evolution of the endemic continued fevers. Sub-tropical meteorology becomes, therefore, of great interest to epidemiologists; for to broad general climatic influences, rather than to mere local insanitary conditions, must we look, I think, for an explanation of much in the etiology of the endemic fevers. We are still comparatively ignorant as to how the imponderable forces of heat, light, and electricity, variations of atmospheric pressure, radiation and evaporation, affect vital processes; but that they do so in a very marked way I think there can be no doubt. The subject, however, is much too recondite for present discussion.

We have lately in this Society had interesting discussions on certain endemic fevers in India, but to-night I shall almost avoid that country, and elect to speak, by way of illustration, chiefly of Bermuda and Gibraltar, two of our stations with which I happen to have a personal acquaintance. Both of these places lie between 30° and 40° North. Bermuda is strictly insular; Gibraltar only partly so. The former is rainy all the year round; the latter only in winter and spring, and is very hot and parched in summer. The summer temperature of both ranges between 78° and 90° Fahr., but is more sustained, with less diurnal range, in Bermuda than in Gibraltar. Both climates are trying in summer, but very pleasant and healthy in winter.

The physical and geological structure of the two places are most unlike. The soft and very porous coralline rock with no elevations over 200 feet in Bermuda, is replaced in Gibraltar by a dense, impervious limestone towering up in a steep ridge 1400 feet. No springs proper exist in either place, and good drinking-water is obtained by catching the rain on the roofs of houses or on cemented slopes, and conducting it into built tanks in the ground.

(a) Synopsis of a paper read before the Epidemiological Society of London on March 3.

The conservancy of the two places is not at all alike. Earth-closets and water-closets exist in the military and naval barracks in Bermuda, but the ordinary privy is usually a mere hole in the porous rock, which allows the more fluid excreta to drain away, and retains the more solid as a pasty mass.

In Gibraltar a complete system of main drainage exists; water is pumped up into reservoirs, with which the drains are flushed, while shafts, carried up the face of the rock above and beyond habitations, ventilate them. When this drainage system was completed, some years ago, it was hoped the notorious fevers of the "Rock" would disappear, but such expectation has not, unfortunately, been realised. I mention this fact, certainly not to discredit such sanitary effort, but only to show that the endemic fevers are not mere products of supposed defective sanitation.

The population in Bermuda is chiefly scattered over the island in homesteads. In Gibraltar it is wholly massed into a crowded town at the western base. But the people neither do, nor are allowed to, live like pigs in either place; especially in Gibraltar are they under the strictest police, military, and sanitary supervision.

I have sketched these places just to show that, while widely different in many physical, sanitary, and social points, the indigenous fevers of both are nevertheless essentially the same. This observation and contrast equally applies to Malta, Hong-Kong, Mauritius, the Cape, and many parts of India. I firmly believe the endemic continued fevers of all subtropical countries are essentially alike and allied; they vary chiefly according to the amount of malaria mixed up with them, whereby they assume a less or more remittent, relapsing, or other anomalous type.

Let me review very shortly the three fevers, already named, comprised in the "continued" group in the Blue Book:—

1. *Febricula.*—It has a variety of names, of which may be mentioned (1) ephemeral fever (from its shortness), (2) ardent fever (especially in India from its sharpness), (3) broken bone (in Bermuda, the West Indies, and the Southern States from the frequent severity of the neuralgic symptoms). Whatever the name, the essential feature of febricula is that it only lasts so many days or hours, and is neither fatal nor complicated. It is *the* seasoning or climatorial fever which very few Europeans escape during early residence in the tropics. It has been ascribed to almost anything or everything of the nature of an exciting cause. My opinion is that if we only knew its true pathology we would have a clue to the pathology and etiology of the more dangerous and complicated endemic forms. In the West India areas the broken-bone variety (not to be confounded with Dengue) occasionally prevails epidemically as a prelude to yellow fever outbursts. This is shown in Bermuda as follows:—The continued group of fevers there (of which febricula would form 80 or 90 per cent.) gave in a series of years the figures 55·3 in an annual ratio of 1000 of mean strength; but in 1863, preceding the yellow fever epidemic of 1864, the ratio rose to 153·6. The prevalence of febricula, therefore, in Bermuda is always viewed with apprehension, as indicating one of those pandemic waves of epidemic influence so well described by Inspector-General Lawson.

2. *Simple Continued Fever.*—When febrile symptoms do not subside, but go on and on for several weeks, but without specific complication, the disease is called simple continued fever. Some maintain that the term "simple" is not only a misnomer but a paradox. For, say they, we do not believe in any continued or prolonged fever without a lesion somewhere, and therefore the term "simple"—meaning uncomplicated—is inapplicable. I will not argue this point, but remark that—which is the experience of hundreds of others—cases of continued fever constantly occur in the subtropics, which have not only no constant specific complication, but no lesion that can be detected of any kind whatever. There is no malaria in Bermuda, and cases of continued fever pure and simple can be well studied there. But in Gibraltar and Malta, where malaria exists, peculiar anomalous hybrid forms of continued fever are found, which have had a variety of names. Marston calls them gastric remittent. Such fevers are most intractable, and often followed by persistent neuroses, which are a source of much inefficiency and invaliding from our Mediterranean garrisons.

3. *Enteric or Typhoid Fevers.*—This form is specially interesting to epidemiologists because of the controversy which has centred and still rages around it. Surgeon-General Ewart lately ably introduced a discussion here on this fever as it appears in India; and we also know the very able and exhaustive reports of Surgeon-General C. A. Gordon on this disease within the Madras Command. I know of no disease which has been more strongly dogmatised upon. A few years ago it was perfect heresy to question, however deferentially, the views of the eminent exponents of the fever in England. Now, however, doubts are pretty freely expressed on its generally recognised causation, especially by Army medical officers, whose experience of it extends to all parts of the world. Buckle, in his "History of Civilisation," says that as unquestioned authority means stagnation and deadness, so honest doubt becomes the parent of progress and reform. Let us therefore welcome honest doubt on any subject. Let us first come to some understanding as to what we severally mean by the term "enteric fever"; otherwise, if we begin by mutual misapprehension, we may end in a battle over mere words and names. Let us agree to a mere anatomical or pathological definition, committing to no theory of causation, specific or otherwise: that enteric is a continued fever presenting certain signs and symptoms, of which the chief and essential one is infiltration, inflammation, and ulceration of the solitary or aggregate glands of Peyer in the intestines. The fever, of which the foregoing is the characteristic complication, has of late years figured largely in military statistics as a source of much mortality in all our intertropical stations. But only a few years ago it scarcely figured at all in these statistics. Are we therefore to conclude that it has become endemic in all our stations from east to west only during the last quarter of a century? The medical history of these stations warrants no such conclusion. Enteric fever is now the chief cause of death in these stations. But did no soldiers die from fever in these places before the term "enteric" came into use? Of course they did, with a higher death-rate than at present—only they died under fever called "continued" merely, or "remittent." The conclusion is, therefore, irresistible that the chief change in the fatal type of intertropical continued fever is only one of name. Such change may, indeed, indicate an advance in pathological knowledge, but it is quite another matter how far it necessitates or involves an entire change in an etiological view. I need not recite the pathognomonic symptoms of enteric fever; suffice it to say that in Gibraltar these symptoms are usually as well marked as in London. In Bermuda, however, I do not think I ever saw the so-called characteristic rash; nor were the stools light or ochrey, but generally dark and bilious. Some may say that these were not true enteric cases; but if not, what were they? For the fatal cases showed the essential bowel lesion, even passing to perforation.

I have rapidly glanced at these three forms of continued fever constituting the Blue Book group; let me now further glance at some points in which they seem to be mutually allied, and mixed up both in their etiology and epidemiology. The *first* broad fact is, that their early symptoms are usually so much alike that it is primarily often impossible to distinguish them, and determine what form will ultimately supervene. Often have I seen cases admitted under febricula, changed to simple continued, and finally to enteric, just as the phenomena slowly developed. The *second* is, that the three forms occur simultaneously, concurrently, and mixed up at the same time, in the same place, or regiment, or community. From the same barrack-room, on the same day, comrades presents themselves, one suffering from febricula, another from simple uncomplicated fever, and a third from the enteric form. The *third* important fact is, that all three forms have the same seasonal period of prevalence, and that period corresponds to the months of highest average temperature and the maximum of solar elevation and power. June to October is the period in north latitudes, and a corresponding reverse period in the southern hemisphere.

When such allied forms of disease as these fevers present such points in common as place, circumstance, and season of occurrence, may we not reasonably conclude that the causation of each is also common to all? If the exciting causes are distinct how are they to be differentiated? If the subjection of a body of men to influences apparently identical results in the evolution of three different forms of fever, some explanation must be forthcoming?

I have often found medical officers who at once conceded that the exciting causation of the short febricula and the longer simple continued was probably identical, but that they considered in enteric there was a *plus* something more. Whether this something more was always specific, or might be evolved *de novo* from pythogenic sources; whether in truth it was wholly outside the patient at all, was the difficulty.

From what I have seen and read I cannot help thinking that the broad factors in all climatorial fevers are, if not identical, entirely similar; that mere local insanitation, however much it may aggravate the type, is not the original or essential exciting cause. I may be asked, If the general causation is so utterly vague and indefinite, how are the different types and varieties of climatorial indigenous fevers to be accounted for? I have tried to do this by looking narrowly into internal or predisposing causes in the individual affected, as well as trying to search out external or exciting causes.

The individualising of the patient in such cases I consider to be of much importance. In Bermuda I endeavoured to carry this out, and noticed, as a rule, that while everyone, of whatever constitutional type, seemed liable to febricula or simple continued fever, the subjects of enteric were almost entirely those presenting some of the physical evidences of a strumous or tubercular tendency. The hard drinkers also were singularly free from enteric, probably because such men are generally of a robust, vascular, arthritic type. If such generalisations are of any value or significance, can it be that like endemic causes, acting on individuals of different constitutional types, will give rise to different forms of climatorial fever?

The individualising of the subjects of these endemic fevers naturally leads to the question of predisposing causes, of which I will mention three—1. Constitutional, hereditary or acquired (which I have already touched upon); 2. Age; 3. Want of acclimatisation.

Youth and immaturity very strongly predispose to all forms of endemic tropical fever. Even in this country enteric fever is chiefly a disease of early manhood. But as far as military statistics are concerned, age and acclimatisation are not to be separated as predisposing causes. This arises from the fact that the young soldier is necessarily a recent arrival, and a recent arrival is nearly always a young soldier.

I am indebted to Deputy Surgeon-General Tydd for the following statistics for British troops in Bengal for 1878 with regard to enteric fever:—In that year there were 166 deaths from enteric fever, which were reported from nearly every division, and indeed from almost every station in the Presidency. This was nearly three times in excess of the average of previous years. And note the following:—About 75 per cent. of the deaths took place in the second and third quarters of the year (summer and autumn); nearly 50 per cent. were among men during their first year in the country, and 60 per cent. were those under twenty-four years of age.

The process of natural selection or weeding out of the subjects most susceptible to endemic causes of disease is therefore a very rapid one; and, whatever may be the true etiology of enteric fever in these Indian stations, it is certainly not to be dissociated from the very marked proclivity which constitutional type, age, and want of acclimatisation (or weeding out) exercises among a body of men.

I will conclude by a short special reference to intertropical enteric fever as seen in the Army.

I assume we are agreed that we may call any case of continued fever, in which the specific bowel lesion is recognised, enteric, without reference to an assumed cause. Starting from such an hypothesis I cannot help thinking that the said enteric lesion is to be found in several forms of a closely allied fever; and that although anatomically specific as a lesion, it does not necessarily spring from only one specific cause. Enteric fever is usually seen in this country in an epidemic form—that is, it tends to propagate itself through the media of air, food, or water,—and I doubt not but that it may occur and spread in identically a similar way in tropical countries. But we can at once subscribe to the doctrines of such eminent exponents of the disease as Budd and Murchison, and at the same time not shut our eyes to the fact that the theories of those great men cannot and do not always and wholly explain the phenomena of sporadic enteric fever in such places as Bermuda, Gibraltar, or an Indian cantonment. Surgeon-General Gordon has shown that fever with enteric lesion occurs in India which cannot reasonably be accounted for either on an assumption of direct propagation or a filth origin *de novo*. Propagationists say it is not the theory that is at fault, but the observer, who does not bring sufficient science or skill to bear upon the investigation.

If the disease arises only from specific germs, then we must assume an almost certain ubiquity and indestructibility for such germs. If the disease always has a filth origin, how do we account for its appearance, say, in the virgin wilds of Zululand? I maintain that in hot climates the theory of propagation, or of pythogenesis, applied to enteric fever, often seems utterly at fault. I could give many instances of this which have come under my own observation. Over and over again, in Bermuda and Gibraltar, I have seen isolated cases of enteric fever, both in barracks and private houses, which a filth theory alone could not possibly explain. For, if such cases arose from soil or water pollution, how came it that scores of other people living under identically the same conditions were not similarly affected? Or, if soil and water contamination is the cause of the disease, why should it be so only in summer and autumn? Such sources of the disease are equally present, and ought to be quite as active during the mild winter and spring in sub-tropical localities. If a cesspit system and a porous absorbent rock be at the bottom of the mischief in Bermuda, as has been often asserted, then we must find some other explanation in Gibraltar, where there is impervious limestone and elaborate main-drainage conservancy.

And so, by a process of logical involution, the etiology of endemic sporadic enteric fever in the tropics becomes a matter of exceeding difficulty and perplexity. We are bound to look at causation from every point of view, but this becomes difficult when preconceived opinions are apt to beset us on every side. *A propos* of this remark, I conclude by quoting from a paper on "Pandemic Influences," by Inspector-General Lawson, in which he says:—"The advance of knowledge has been much impeded by the disposition, so strong among medical writers and observers, to regard disease as they individually see it, and refer its prevalence and character to circumstances affecting obviously the population within their immediate sphere, while, had their observations been extended to other countries, a similar prevalence of disease might have been found, under local circumstances, very different from those thought so essential to its occurrence among themselves."

CASES OF OVARIOTOMY.

By GEORGE WHYTE, M.D.

Case 2.—Mrs. F., a widow, aged sixty-four, consulted me in January, 1873, for indigestion, accompanied with very troublesome flatulence and constipation. She was married in 1827, and a year afterwards was delivered of a healthy girl. Two years subsequent to this she had a miscarriage, but made a good recovery. She enjoyed good health up to 1866, when she began to suffer from uneasiness and pain in the lower part of her belly. She never detected any "lump," but fancied she was "swollen." Her husband died in 1871, and she has got much weaker since, suffering greatly from sickness and flatulence. On examination I found the abdomen occupied by a large tumour extending upwards considerably above the umbilicus. The abdominal parietes were very thick from fat, but the size and shape of the tumour were easily made out. It was quite soft to the feel and fluctuated in every direction, slightly movable from side to side, and free from pain except on deep pressure low down on the left side. Round the umbilicus she measured forty-two inches.

The uterus was low down and scarcely influenced by pressure on, or manipulation of, the tumour. The os was soft and natural to the feel, and the sound passed two inches and a half. Through the vagina and also through the rectum the tumour felt soft, and fluctuation was very perceptible. At date of examination the patient was thin and sallow-looking in the face, and had considerable difficulty in breathing, apparently due to the upward pressure of the tumour and flatulence. She was subject to asthmatic attacks; the lungs and heart, however, as also the kidneys, were healthy. The stomach and liver were a good deal out of order, but under simple treatment she was better in a few days, after which I tapped the tumour and removed

twelve pints of a thick, dark-coloured fluid of specific gravity 1046. She recovered well from the tapping, but the fluid gradually collected again, and by the month of May she was as bad as ever. She readily consented to have the tumour removed, and on May 14 the operation was performed in the presence of Drs. Ross, Duff, Mackay, and Adam, Elgin; and Dr. Eades, Calcutta.

The patient having been put under chloroform, I began the operation by making an incision three inches long, beginning two inches below the umbilicus. The abdominal wall was fully an inch thick from fat; but no vessel required ligature. After exposing the tumour, I passed my hand round, and found, as I had anticipated, no parietal adhesions. On emptying the large cyst with a trocar and attempting to withdraw it, I found some very firm, though not extensive, pelvic adhesions, which I gradually separated, and withdrew the sac without much difficulty. The pedicle was between two and three inches broad, and, as it was short, I tied it with carbolised silk at two different points in its length, each ligature embracing more than half the width of the pedicle. The ligatures having been cut short and the tumour cut away, the stump of the pedicle was washed with carbolic acid and glycerine and dropped into the abdomen. The right ovary was examined and found healthy. The abdominal wound was closed with four deep carbolised silk sutures passed from within outwards through the peritoneum, with superficial sutures between each two. A couple of folds of lint soaked in carbolic oil was placed over the wound, and above this a thick layer of cotton wadding, and the whole kept firmly in position by a flannel roller, and the patient put to bed.

The after-progress of the case was in every way satisfactory. There was slight sickness during the day, but it passed away by evening. The patient got her water naturally from the first. The highest temperature was 99·5°, and there was scarcely any pain complained of. Flatulence was the only thing that annoyed her, and this gave considerable trouble; and what I found give most relief was drop doses of liq. strychniæ every hour. I removed the stitches on the fifth day, and she was out walking on May 29.

The tumour consisted of one large cyst and some smaller ones, the former containing about sixteen pounds of fluid.

Case 3.—In January, 1878, I was asked to see a young woman, Mrs. Y., aged nineteen, who had been married only about three months. From her size she appeared near her confinement, and, indeed, some of her friends suspected that she was in the family-way; but I easily convinced them that this was not the case.

The patient was a well-made, healthy-looking woman, with a ruddy complexion and calm and placid disposition. She had always enjoyed remarkably good health, but had not menstruated for two years, and as she was gradually increasing in size she thought there might be some "obstruction." On a general examination I found her perfectly healthy as regards digestive system, kidneys, lungs, and heart. There was no right radial pulse; the left, however, was full and strong. She measured thirty-six inches round the umbilicus, fourteen inches from ensiform cartilage to pubis, eight inches from umbilicus to the right anterior superior spine of ilium, and ten inches to the left. This increased size was due to a large irregularly globular tumour in the abdomen, hard and firm to the feel, except in front, where there was distinct fluctuation. The tumour was to a slight extent movable; but changing the position of the patient had little apparent effect on its position. The womb was easily reached and freely movable; sound passed two inches; os soft and natural. Felt through the vagina and rectum, the tumour was hard and irregular, without any discoverable fluctuation. I was unable to dislodge it from the pelvis, even with the patient placed on her hands and elbows. The sound lodged in the uterus was visibly influenced by pressing the tumour from side to side. On examining with the stethoscope I could detect neither bruit nor crepitations anywhere over the abdomen. There was also entire absence of pain on pressure or manipulation of the tumour, whether practised externally or through the rectum or vagina. The only thing of which the patient complained was shortness of breath and frequent micturition, and latterly she had got thinner and became wearied on exertion. I aspirated the anterior cyst and removed about two pints of a clear colloid fluid. The patient rose next day against orders, and there was an escape of fluid into the peritoneal cavity. A week later, on making another examination, I discovered a considerable amount of fluid in the abdomen, and the tumour was more freely movable, and could now be dislodged from the pelvis on placing the patient on her knees and elbows. This satisfied me as to the absence of pelvic adhesions, about which I was suspicious; and from the absence of crepitation or any history of inflammatory attacks, and the general mobility of the tumour, I thought there would be no adhesions of any consequence.

I explained the nature of the disease to the patient and her friends, and they at once made up their minds to allow me to remove it, and this I accordingly did on March 21, in presence of Drs. Duff, Mackay, and Adam, Elgin; and Dr. Creyk, Ballindalloch. Chloroform was administered by Dr. Robertson, House-Surgeon to Gray's Hospital.

I began with an incision four inches long, but afterwards had to extend it other two or three inches. After exposing the tumour, I passed my hand round it, and, with the exception of a few flocculent bands, found no adhesions. A quantity of ovarian fluid escaped on opening the peritoneum, and was conducted into a pail. I next tapped the front cyst and emptied it, and afterwards pushed the trocar into the tumour in various directions, but made almost no progress in lessening its bulk, so I made a free incision into its substance, and, introducing my hand, broke up, with very considerable difficulty, a number of small cysts, removing the fluid with sponges as it escaped. I was thus enabled after a while to withdraw the solid mass. The pedicle, which was thick and about three inches broad, was secured in a clamp and cut across. The right ovary was examined and found healthy, and then the peritoneal cavity was carefully and thoroughly cleaned out, using carbolic acid freely (lotion one in forty). The abdominal wound was closed with eight deep sutures used in the same way as in the previous case, with intermediate superficial ones. The clamp and pedicle were arranged and padded round with lint soaked in carbolic oil, and the external wound dressed as in previous case. The operation lasted over an hour, the greater part of the time being occupied in breaking up the tumour and sponging out the peritoneal cavity.

The solid part of the tumour weighed 7 lbs., and the fluid about 14 lbs., or 21 lbs. in all.

The patient slept for about an hour after she was put to bed, and then woke up pained and restless, with temperature 97°. I gave her one-third of a grain morphia subcutaneously, after which she slept for about six hours, and then woke up perspiring; temperature 98°. I repeated the morphia injection as she was in some pain, and it was repeated afterwards every eight hours for a few days. I only required to draw off the water three times. The highest temperature recorded was 99·2°, which was on the third day. The stitches were removed on the fifth day. The bowels were opened with an enema on the sixth day, and the clamp came away on April 2. The patient made a capital recovery without a bad symptom, and she left on a visit to Aberdeen three weeks after the operation.

I delivered this woman of a child in February, 1879, and she is again pregnant.

Case 4.—Mrs. L., a young married woman, aged twenty-six, came from Forres to consult me about an abdominal tumour from which she had been suffering. I first saw her in February, 1879, and she informed me that it began in the right side about two years previously, and that during the last six months it had rapidly increased. The tumour was a large semi-solid one, very irregular in shape, the irregularities being easily seen through the abdominal parietes, which were very thin. Fluctuation was distinct, and three cysts were made out; the rest of the tumour was solid and hard to the feel. It was scarcely at all movable, and seemed firmly fixed below and jammed into the pelvis especially on the right side, and pressure in this region caused severe pain. A coil of intestine lay over the upper and left side, and apparently adherent to it. Round the umbilicus the measurement was thirty-three inches; from ensiform cartilage to pubis thirteen inches and a half; from umbilicus to right anterior superior spine of ilium eight inches and a half, and to left seven inches.

The womb was low down, movable, and situated to the left side; os natural; sound passed three inches. Felt through the vagina and rectum, the tumour was hard and irregular. The slightest pressure here caused severe pain, and she was so

sensitive to any interference that I was unable to examine as completely as I wished. The tumour was evidently firmly fixed in the pelvis by adhesions, and Dr. Buttler, of Forres, under whose care she had been, gave me a very distinct history of a severe inflammatory attack from which she had suffered some months previously, and subsequently she had repeated attacks of pain over the abdomen, lasting for several days at a time and accompanied by fever.

My diagnosis was multilocular tumour of right ovary, with firm pelvic adhesions and also parietal and intestinal. The patient was a small, spare woman of good courage, and exceedingly anxious for an operation. She was thin and emaciated, but otherwise quite healthy. She was the mother of one child—a boy—which she had weaned a month before she came to me, and she had altered since. As she was expecting her term on again in a few days, I sent her home and told her to return when her term had passed. This happened in about a week, and I performed the operation on February 13, 1878. There were present Drs. Buttler and Petrie Hay, Forres; Drs. Duff and Adam, Elgin; and Mr. James Ross, Gray's Hospital, who gave chloroform.

I made my external incision five inches long, and as the abdominal wall was very thin, I cut down with great care, and found the anterior cyst adherent to the peritoneum, and it was unavoidably opened. The contents, which were like thin gruel, were conducted into a pail beneath the table; but a good deal got into the abdominal cavity in separating the adhesions. The tumour was found firmly and extensively adherent to the abdominal parietes, except at the left side. After separating these adhesions I passed a large trocar into a cyst, but the fluid did not flow out, so I placed my hand behind the tumour, and, pressing it forward, I made a free incision into it, and scooped out the contents with my other hand, breaking up other cysts at the same time. On withdrawing the tumour the intestines and omentum were found also extensively adherent. The intestines I separated with great care, but the omentum was much torn, and I had to tie it in five parts besides securing a number of bleeding points. The ligatures used were all carbolised silk, and they were cut short, and the omentum trimmed with scissors. I next came upon the pelvic adhesions, which were the firmest of all, and my hand was quite tired before I succeeded in getting the whole tumour out. The pedicle, which was long and about three inches broad, was secured in a clamp, and the tumour cut away. The peritoneal cavity was thoroughly sponged and washed out with carbolic acid water (one in forty). A quantity of partly organised lymph covering the intestines and omentum was sponged away. I then inserted a glass drainage-tube, and dressed the external wound in the usual way with deep and superficial stitches and carbolic oil and cotton wadding dressing. I gave the patient one-third of a grain of morphia subcutaneously before putting her to bed. The left ovary was quite healthy. The tumour weighed fifteen pounds, of which six pounds was solid. The patient woke up in two hours, slightly sick; temperature 98·3°; pulse 90, feeble but regular. She again fell asleep for about four hours, and as she woke complaining of pain I gave her another dose of morphia.

Notwithstanding that this was a very serious and prolonged operation, lasting for an hour and twenty minutes, the patient made an uninterrupted recovery. I was very anxious for a couple of days, but nothing occurred to cause anxiety. On the second day after the operation the temperature rose to 101°, and the pulse 120, with considerable pain over the abdomen, but one-third of a grain of morphia soon sent her to sleep again, and she awoke better with temperature 99°. I twice removed through the drainage-tube two ounces of sanguineous and flaky fluid, strongly smelling of carbolic acid, and on the second day removed the tube. The sickness was quite gone the day after the operation. Morphia was given every eight hours for a few days, and then night and morning till the sixth day. The stitches were removed on the fourth day, the bowels opened on the sixth, I cut the clamp away on the eleventh, and she went home three weeks after the operation, but was going about for some days previously.

This patient is now pregnant, and shortly expects her confinement.

Case 5.—This case was a very simple one, and in marked contrast to the last. The patient was a married woman, Mrs. W., aged thirty-one, the mother of three children, the youngest being two years old. She came under my care first in March, 1878, when I tapped her, removing fifteen pints of fluid. The tumour very slowly refilled; and in September, 1879, she again sought relief. At this time she measured round the umbilicus forty-six inches, from ensiform cartilage to pubis twenty-one inches and a half, from umbilicus to right anterior superior spine of ilium eleven inches, and to left twelve inches and a half. There was universal dulness on percussion, extending upwards to the ribs. The tumour was quite soft all over, with quick distinct fluctuation in every direction. The uterus was high up. I did not introduce the sound, as the patient thought she was pregnant. Through the vagina and rectum some hardness was felt; but there was no pain, and fluctuation was distinct. She had altered regularly to within the last three months. I could not arrive at a decision as to whether she was pregnant or not; but I recommended the removal of the tumour instead of a second tapping, and she said she "would leave it in my hands." After the first tapping, I made a very careful examination, and satisfied myself that the case was a very favourable one for an operation, and so had little hesitation in advising her to submit to the radical cure.

I performed the operation on September 7, 1879, in the presence of Dr. Liston Paul, London; Drs. Duff and Adam, Elgin; and Mr. James Ross, Gray's Hospital, who gave chloroform. The operation was simple. After the tumour was exposed I passed my hand over its surface, and, finding no adhesions, tapped it with a large trocar, and gradually emptied and withdrew the cyst with ease. The pedicle, which was fully three inches broad, thick and fleshy, was secured in a clamp, and the tumour cut away. The left ovary was found healthy, and the womb enlarged. The abdominal wound was dressed, as in the other cases, and the patient put to bed. The tumour weighed forty-one pounds, the solid part being three pounds and a half. The night after the operation the temperature rose to 102°, and there was considerable pain situated in the right groin and hip. I gave one-third of a grain of morphia subcutaneously, and repeated it in an hour, as the pain continued severe. She fell into a sound sleep, and awoke relieved, with the temperature 99°. There was considerable dragging of the pedicle, and I regretted not having tied it instead of using the clamp. With the exception, however, of some annoyance from this cause, the patient made a good and rapid recovery. I required to draw off her water for eight days. The pedicle I cut away on the twelfth day.

This patient was delivered of a still-born child about three months after the operation, and it appeared to be at the sixth month.

The above four cases, and the one I published in the *Medical Times and Gazette* in September, 1867, are all the cases of ovariotomy I have had, and it is a great satisfaction to me that they have all been successful. With so limited an experience, it is not my intention to make many remarks. I would like, however, to say that, although I did not use the carbolic spray, I practised a very strict antiseptic treatment. The utmost attention was paid to the cleanliness of the patient, her body and bedclothes, and her surroundings. All sponges used in the operation were allowed to lie in dilute hydrochloric acid for a night, and then were thoroughly washed, and soaked in carbolic acid lotion. All water used was a solution of carbolic acid one in forty. The external wound was dressed with cotton wadding, with a couple of folds of lint soaked in carbolic oil to prevent the wadding sticking to the wound. This is the dressing I almost always use in my surgical cases, and I find that in recent wounds union by first intention is the rule.

In my last three cases of ovariotomy I have used morphia subcutaneously very freely, and have found it of great use in keeping the patient quiet and comfortable and free from pain, and I have frequently noticed that the temperature has fallen soon after an injection of it.

Northview, Elgin.

Casualties in the St. Gothard Tunnel.—From the beginning of the boring up to December last the number of workmen killed was 106, and seriously injured about 300. Further, up to February 28 last, when the wall between the two tunnels was pierced, the casualties had amounted to 150 killed and 400 disabled. In proportion to the total number of workmen employed, the killed form 1 per cent. and the injured 2½ per cent.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

LONDON HOSPITAL.

ACUTE DILATATION OF HEART AFTER SCARLATINAL DROPSY—? CARDIAC THROMBOSIS—RIGHT HEMIPLEGIA.

(Under the care of Dr. THOMAS BARLOW.)

Mary E., aged seven years, was brought to the out-patient department of the London Hospital on August 14, 1879. The statement given was that two months before she had had a mild attack of scarlet fever. In a fortnight this had been followed by dropsy, and the child had complained of pain over her heart. The dropsy had gradually subsided, but for a few days her breathing had become very bad, and this was the reason she was brought. She was a thin, delicate-looking child, with blue lips and almost tallowy complexion. Her extremities were cold, her breath was cold, and the wrist was almost pulseless. Her heart's impulse was distinctly felt outside the nipple line, but it was very feeble. The sounds were feeble and a little irregular, but no murmur could be detected. She was breathing fast, and exceedingly intolerant of examination, screaming out the moment she was touched. There was very slight dropsy under the eyes and about the ankles. The soles of the feet were desquamating a little. Her temperature was normal. She passed a little urine, which was not smoky at all, but gave a trace of albumen.

Her condition was looked upon as almost desperate, but she was admitted, and directions given that she should have hot bottles to her feet, egg-and-milk at short intervals, and three grains of carbonate of ammonia and ten drops of sulphuric ether every four hours. She rallied a little, and next day five drops of tincture of digitalis were substituted for the ether. Within the next few days she greatly improved. The heart's action became regular; there was no murmur still to be heard. On the 19th, in the evening, when the House-Physician was making his rounds, he was told by the nurse that the child had had a sort of fit. But it could not be ascertained that she had twitched. She had become insensible for a few moments and passed her fæces and urine involuntarily. The House-Physician noted that the child was very dull, that there was some ptosis on the left side, and drawing-up of the left corner of the mouth. *She could not be induced to sperk.* Respirations 40; pulse 112; temperature 99°.

On August 20, when seen by Dr. Barlow, the child had distinct right hemiplegia. When at rest, no deviation of the face was seen; but when the child made any strong muscular effort of any kind, the left naso-oral ridge came markedly into relief. There was no paralysis of the upper part of the face. The tongue was protruded towards the right side. The pupils were natural, there was no ocular palsy, the ptosis had disappeared, and ophthalmoscopic examination gave no abnormal sign. The right leg was drawn up a little when the sole was tickled. The right arm was absolutely powerless as far as voluntary movement was concerned. There was no alteration of sensation. The child could swallow well, although she dribbled a little. Her speech was perfectly good in every way, and, although she was quiet and reticent, she understood what was said to her, and gave intelligent replies. It was stated that she passed her water under her; but this was not of much importance in a child.

21st.—Hemiplegia as before. It is stated that she still passes her water under her, and that she has been a little delirious, and has been "picking at her skin." Heart's impulse certainly now entirely internal to nipple line, viz., in fourth and fifth spaces. The sounds are regular and fairly defined. No murmur anywhere. Pulse 112. There is no œdema.

During the next fortnight the hemiplegia continued with little change. There was no recurrence of delirium, and the child after two or three days called out as before when she wished to pass her urine.

On the ninth day after the onset of the hemiplegia there was noted slight spastic rigidity in semi-flexed position of the fingers of the right hand, and there was a little excessive reflex in the lower limb; thus, drawing the finger-nail along the inner side of the right foot caused the tibialis anticus to contract.

On September 4, the sixteenth day following the onset, the spastic contraction of the fingers was more marked. Straightening the fingers elicited resistance both in their flexors and in those of the wrist. There was very marked "clonus" at the ankle when the slightest pressure was made on the sole. The heart's impulse was well within the nipple line. No murmur. Pulse 100 when sitting up.

On September 8 the child moved her leg voluntarily, and on the 10th she walked with support, circumducting the lower limb in the characteristic hemiplegic way. On the 15th a little voluntary power had returned to the shoulder and elbow, but none over the wrist or fingers.

Treatment was now commenced with a view to overcome the tendency to spastic rigidity—viz., friction with oil, opposing movements, and gentle galvanism down the back of the forearm and down the calf. With the foot there was the tendency to inversion and flexion of the toes, and with the hand to flexion and pronation of the wrist, with flexion of the thumb and fingers. She had regained considerable control over her ankle and foot, but had still no voluntary power of supination or extension of fingers, when (on October 20) she began to sicken with what proved a severe attack of typhoid fever.

On December 20 she was convalescent from the typhoid, and about in the ward again. The former treatment was recommenced. In about a fortnight she walked moderately, and, indeed, was able to hop on the right foot, but there was still great difficulty in supination. Some advantage was obtained by forcibly supinating the wrist, and then placing a weight on the palm and getting the child to hold the weight as long as she could. She was made an out-patient in January, 1880, and her mother instructed in regard to the use of opposing movements, friction, etc. How far these instructions were carried out is doubtful, but when the child was last seen in February she walked well, the power of supination was considerably restored, and there was also some voluntary power of extension of fingers and thumb. The heart was perfectly natural, and the child was well in other ways and fairly intelligent.

Remarks (by Dr. Barlow).—1. What was the condition of the heart when the child was brought to the hospital? From first to last neither friction-sound nor murmur could be heard, and it is certain that within a week the heart's impulse travelled from a position external to the nipple to one well within the nipple line in the fourth and fifth spaces. It appears to me most probable that the heart was at first in a state of acute dilatation, such as has been recently described by Dr. Goodhart as an occasional cause of death in scarlatina and post-scarlatinal conditions.(a) At or about the same time that the heart was becoming contracted, the child got an attack of right hemiplegia. Cases of hemiplegia in children in whom no cardiac murmur can be detected are not unfrequently traced as a sequel to one of the acute specific fevers, and there is the same difficulty in explaining their mode of production as in many cases of puerperal hemiplegia. Thrombosis either of cerebral veins or cerebral arteries has found most favour as the probable factor. Now, thrombosis of cerebral sinuses from altered blood-state is almost always bilateral, and definite brain-symptoms in cases which I have seen have been mostly bilateral, depending probably on irritation of the cortical grey matter from capillary extravasations subsequent to the thrombosis. Amongst such symptoms I may mention repeated sharp screams, epileptoid convulsions, and contractures. Thrombosis of cerebral arteries, I think, rarely takes place unless the inner coat of the arteries be diseased either by syphilis, atheroma, or aneurismal change—all of which could probably be excluded in this case. I have made a post-mortem examination of a child—a patient of Dr. Gee's—who had noma vulvæ, and without cardiac murmur got hemiplegia, and in whom it appeared obvious that thrombus had existed during life in the left auricular appendix, that some of it had broken down, and some pieces been carried to the kidneys, giving rise to infarctions, whilst others were carried to the middle cerebral arteries. In the patient Mary E., the extremely feeble pulse, great

(a) *Vide* last volume of *Guy's Hospital Reports*.

dyspnœa, irritability, and cold extremities, were quite consistent with the formation of a cardiac thrombosis, and the occurrence of the hemiplegia about the time when the heart was becoming contracted leads me to believe that some of the thrombus was then possibly dislodged, and converted into a cerebral embolon or embola. From the persistence of the hemiplegia it seems likely that there was a certain amount of brain-softening; and, as a matter of probabilities, I believe this was cortical rather than deep, and that it affected the motor centres in the neighbourhood of the left fissure of Rolando. The recovery (which was not quite complete so far as the arm was concerned) was probably due to corresponding portions of the opposite hemisphere taking on vicarious functions, rather than to restoration of function to the damaged area. That in the brain of a child even so very specialised a convolution as the third left frontal can become compensated for, I have elsewhere shown reason for believing. The only speech-alteration observed in this child was that the House-Physician could not get her to utter a word on the evening of the onset of the hemiplegia. Next day she spoke perfectly. In the case of a child under three years old there was for one day after his attack of right hemiplegia absolute speechlessness, although he moaned, and obviously recognised his mother and nurse, and showed other signs of intelligence, such as holding his cup, etc. On the second day he spoke intelligently. It is certain that aphasia in children with right hemiplegia is often conspicuous by its absence or its short duration. But I suspect that some *speech-altcration* will be found in the early period if looked for. Simple speechlessness is not likely to be thought of so much importance as the transposition of words, and might easily be ignored. The House-Physician observed on the evening after the onset of the hemiplegia, that there was ptosis of the left side. This had disappeared the next day, but I see no reason for doubting the accuracy of the observation. I have seen three cases in which the same transitory phenomenon occurred—that is, ptosis of the opposite side to the hemiplegia. I believe it is now held that there is a separate cortical centre for the levator palpebræ. Such transitory paralyses are common in tubercular meningitis, whatever the cause may be. The occurrence of early rigidity, as in this case, is by no means so bad an omen in children as in adults. It is certain that such cases may completely recover, and so far from discouraging us in the matter of treatment, I should feel strongly that they indicate the use of galvanism, friction, and opposing movements. These methods should be adopted with a view not only to keep up the nutrition of muscles and prevent contraction, but also, by evoking the maximum volition of the patient, keep the downward paths open along the track of brain, nerve, and muscle. In the matter of prognosis, with such clinical means as we have at present, it seems impossible to tell whether the hemiplegia will entirely disappear or will be followed by arrested growth of the hemiplegic side.

Assassination of a Medical Practitioner and his Wife.—According to the *Courier de la Gironde*, quoted by the *Progrès Medical*, April 10, a fearful crime has thrown the whole of the Médoc into a state of consternation. Dr. Eyffren, aged forty-five, with his wife Madame Eyffren, aged thirty-three, inhabited a house close to the *gendarmerie* in the village of St. Laurent, and, as usual, both had retired to rest in their bedchamber on the first floor. No doubt one of them having heard the noise of the street-door being forced, had gone down stairs to ascertain the cause, and must have been met by the assassin armed with a knife or poignard. Whether this was the husband or wife no one can tell; but it is evident that the other, finding the one who had descended did not come back, went down also to ascertain how matters stood, and was also received at the bottom of the staircase by the assassin. A woman living near, having opened the door of the Eyffrens' house in the morning, found their two bodies lying in a pool of blood. That of the husband had been stabbed in fifteen places and was mutilated, while that of the wife had only received three wounds, one of which in the heart must have proved immediately fatal. The motive of the crime is wrapped in obscurity, for the couple were not well off; and although the furniture and the contents of drawers were found in confusion, a gold watch was the only article known to have been stolen.

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Medical Times and Gazette.

SATURDAY, APRIL 17, 1880.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

The Council of the Royal College of Surgeons had under consideration, in the early part of last year, the question of requiring candidates, who have been so unfortunate as to fail in passing any of their examinations, to pay for the privilege of re-examination, should they desire to undergo that ordeal. It appeared to the Council that as the expense of each examination is considerable, it would be only just and right that candidates should always pay at least the sum that their examination actually costs the College, instead of having to pay an additional fee only after two consecutive failures, as has been the rule hitherto. And it was thought, moreover, we believe, that the having to pay the cost of every re-examination might not improbably induce gentlemen to be somewhat more chary of presenting themselves for examination before they had a fair assurance of being well prepared, instead of "taking a shot at it," as it is said some of them do nowadays. Anyhow, the Council adopted the "principle" that "candidates who have been rejected at any examination of the College must, on re-examination, pay at least such fees as will cover the expenses of the re-examination"; and a Committee was appointed to consider "the whole question of the payment of fees," and to draw up new regulations relating to payments by candidates for the Membership and Fellowship. The report of this Committee came before the Council at their ordinary meeting in March this year, was discussed, amended, and adopted; and was confirmed, after reconsideration, at the Council-meeting held on Thursday last week. The new regulations are as follows:—

For the Primary Examination for the Membership the fee shall be five guineas, or, if it be the re-examination of a previously unsuccessful candidate, three guineas; and the fee shall not be returned to a candidate who fails to pass the examination or re-examination. For the Final Examination or re-examination the fee shall be fifteen guineas, over and

above all charge for stamps; and ten guineas shall be returned to a candidate who fails to pass the examination or re-examination.

The fees to be paid for admission to the Fellowship by examination, over and above all charge for stamps, shall be as follows:—(*a*) For Members of the College, if succeeding on their first examination, fifteen guineas, but with a liability to higher payment (as hereinafter provided) in cases where re-examination is required; (*b*) for persons not Members of the College, thirty guineas. Of the above respective amounts one-third part shall be paid before admission to the Primary (or Anatomical and Physiological) Examination; and the remaining two-thirds, together with the charge for stamps, shall be paid before admission to the *Final* Examination. Of the fee of five guineas, to be paid by Members of the College before they are admitted to the *Primary* Examination, no portion will be returned to unsuccessful candidates; but of the fee of ten guineas, to be paid by persons who are not Members, half will, in case of rejection, be returned. Of the fee of ten guineas, to be paid by Members of the College before they are admitted to the *Final* Examination, no portion will be returned to unsuccessful candidates; but of the fee of twenty guineas, to be paid by persons who are not Members, half will, in case of rejection, be returned. And in all cases, any money which has been prepaid as a charge for stamps will be returned to rejected candidates.

Candidates who, having failed at an examination, subsequently desire *re-examination*, are, on each such occasion, subject to the same conditions regarding payment as those on which they were first examined: except that in all cases previous payments shall be taken into account, and that, if in any case a total payment of thirty guineas for the Fellowship has been made, no further payment shall be required.

To the principle of these rules no one can fairly take exception; and the fees charged for re-examinations have been settled by strict and careful calculations of the expenses. We hope one effect of the regulations will be to give help to the teachers at the medical schools in preventing men from "going up" before they can fairly hope to succeed in passing. But in addition to other justifications of the changes made, in this respect, in the regulations of the College relating to examinations, it may be assumed that financial considerations have also had some share in deciding or hastening their adoption by the Council. During the last five years the "working expenses" of the College have increased very considerably, viz., from about £4100 to about £5200 a year: so that while, on a general estimate of the total income and expenditure of the College during the last ten years, it appears that (omitting trust funds from the comparison) in the first five years there was an average annual profit of about £500, in the last five years there was an average annual loss of more than £50; and this, though there was in the last five years an increase of £500 a year in the income from investments. The increase in the "working expenses" has been chiefly due to salaries and wages, printing, repairs, and alterations; while the Museum expenses have remained nearly stationary, and the Library expenses have increased about £90 a year. It would, of course, be very poor economy to attempt to cut down the expenses of the Museum and Library. On the contrary, still larger sums of money may with advantage be expended on them. And as the increase of expenditure in salaries and wages has been due to "the increasing length and value of the services rendered," it does not seem possible or just to diminish the expenditure thus caused during the lives of the present officers and servants. But the Committee on Fees calculated that the re-examinations for the Membership cost the College not less than £1200 a year; and, allowing for the number of candidates who will come up better prepared, the Committee considered that one result of the new regulations will be equivalent to a saving of £700 a year. An additional saving, though comparatively a small one, will be effected by the extra payments for re-examinations for the Fellowship; and some further saving by a reduction in the capitation-fee paid to the Court of Examiners for the examinations for the Fellowship, and in the payments to the Examiners in Dental Surgery. Altogether it is considered that the changes decided on will probably make a total saving of nearly £1000 a year, thereby placing the College in a much more satisfactory position financially. It may be added that the new regulations cannot take effect till they have been approved by one of the Secretaries of State.

Probably very few Members of the College are aware that every member of the Council of the College has to pay a fee of twenty guineas prior to his first admission to the Council; and every person elected to be a member of the Court of Examiners, a like fee prior to his first admission. The Committee, in the report which we have been noticing, recommended that these payments should be done away with; but their recommendations on these points were not approved of by the Council.

HOSPITAL NURSING.

Elsewhere in our pages, this week, will be found a brief sketch of the system of nursing that obtained in Guy's Hospital during the past ten years, and that now in force in the London Hospital. In the paper in the *Nineteenth Century* on "The Present Crisis at Guy's Hospital," from which we quoted largely in our article, last week, on "Lady Nurses," the writer gives a description of what she calls the "old system" of nursing, and affirms that it "is still in full force" in the London Hospital, and was maintained in Guy's Hospital until November last. Our readers can now compare the system as described by Miss Lonsdale, and as it really existed in the one hospital and still exists in the other; and can judge for themselves of the large amount of exaggeration and unfairness, and the small modicum of truth, contained in her fancy sketch of the old "system." We need not repeat here those parts of the *Nineteenth Century* article that we have already quoted, but we may add that, according to the writer, the nurses of the old system were "women drawn mainly from the class to which the domestic charwoman belongs, who, having received no kind of training whatever, were, perhaps, first taken into the hospital, after a superficial inquiry, or no inquiry at all, had been made into their character, in the position of scrubber or ward-maid, in order that they might see and learn, as well as they could, what went on there; or perhaps they were received at very small pay, or none, as a probationer or assistant nurse, to help in the work of nursing patients. At the end of three months, less or more, according to the convenience of the matron, and at the recommendation probably of the head nurse or sister of the ward, these women would be promoted to the position of head nurses themselves—having learnt, it is true, all that their superiors were able to teach them about the art of nursing, but being totally without experience of their own." They were, the public are told, "physically and morally untrained"; and much, that we need not repeat, is said of their drunkenness and low morality. The night nurses belonged to a "still lower and less intelligent class of women," and it is said that "constantly very aged and feeble, to say nothing of hopelessly drunken, women were considered fit for nothing else but this branch of duty"—a statement which must be meant, if meaning anything, to imply that such women were considered fit for employment as night nurses. Let us turn now to the statements given elsewhere, and made on autho-

rity, of the system as it really was in Guy's, and is in the London Hospital. The ward-maid or scrubber is entirely separate from the nurses. The probationer nurses are selected chiefly from the class of respectable domestic servants, and, whether previously trained or not in other hospitals, are again trained for never less than six, and generally for twelve, months; and all this applies to night as well as to day nurses. The sisters of the wards are, or we should say were, selected from ladies in the middle class of life; and at the London Hospital the authorities have for some years endeavoured to secure well-educated ladies as sisters, and two of the sisters are always engaged as night sisters, exercising a supervision over all the night nurses.

Now, great as the difference is between the reality and the fancy sketch, we do not contend for a moment that the system employed in either hospital was nearly perfect. No one thought so. At the London Hospital the authorities have long been engaged in improving the details of their nursing system, and are still working to improve them; while at Guy's Hospital the changes and improvements made in the nursing of late years were brought about through representations made by the medical staff, who were also fully alive to the desirability of further improvements in various directions.

The "present crisis at Guy's Hospital" must be greatly regretted by all who desire to see improvements effected in hospital nursing, and, most of all, by hospital physicians and surgeons, as it can hardly fail to increase for a time whatever prejudices exist against the nursing at our hospitals by and through especially trained and skilled ladies. For, though the first error, and a very grave one, in the matter was made by the Treasurer of the Hospital in planning and setting in action an entire change in the nursing system without any reference to or consultation with the medical staff, yet the difficulties that have arisen, and the "crisis," have been mainly, if not entirely, brought about by the new Matron's singular want of those very qualities which Miss Lonsdale asserts—and rightly—that a matron or superintendent of nursing ought invariably to possess, namely, "true tact and discernment." Had some amount of discretion, tact, consideration, and patience been exercised in the management of the intended reform, almost all the changes contemplated might, we suspect, have been carried out without any serious opposition or friction. But large and radical changes were introduced suddenly, hastily, and with a high hand, and the consequences have been lamentable. We have had a contest between the Treasurer and the whole medical and surgical staff, appeals to the governors of the Hospital, appeals to the public, indignant remonstrances, and general disturbance, discontent, and dissatisfaction. And every point of friction has been highly accentuated by the most unfortunate and unwise tone of the *Nineteenth Century* article. Not the least, by any means, of the evils that have resulted is the fact that the Hospital has lost about two-thirds of its experienced nurses; and the difficulty of quickly replacing them has led, we understand, to the employment of nurses so much younger and of such inferior physique that many of them have been unable to stand the work, and there has been much invaliding. Such occurrences cannot but discredit the new system and add to all the other difficulties.

A great opportunity of gradually and quietly improving and reforming the nursing at Guy's Hospital has been thrown away, and all the contemplated benefits of any change have been imperilled; but as the points in dispute are still under consideration by the Court of Committees, after conference with the medical staff, we will hope that some satisfactory arrangement of the existing differences may yet be arrived at. The medical staff will gladly hail any real and acknowledged improvements; but it must be remembered, on the other side, that there does not exist, as yet, any one unquestionably proven and best system of nursing in large hospitals. The circulating system may be the best, or at any rate may work excellently well, in smaller institutions, and is, no doubt, the best for educating and training a large number of nurses—for, in fact, carrying on a school for nurses,—but there is a great deal to be said for the ward system, and it may be the system best calculated to do the greatest good in the large hospitals. This is one of the questions that has to be very carefully considered, among others. And, at any rate, the physicians and surgeons must be consulted about nursing systems, which should certainly be controlled by them rather than by "the torrent of public opinion."

THE WEEK.

TOPICS OF THE DAY.

We have at last to record the termination of the Board of Trade inquiry into the formation of banks in the Thames, causing obstruction to the navigation. The proceedings have occupied exactly twenty-five days, and the last meeting was devoted to the reply of Mr. Pope, Q.C., on the whole case, on behalf of the Thames Conservancy. He pointed out that the inquiry did not touch the question of pollution, though sooner or later that would have to form the subject-matter of investigation; the present question was simply whether, and how far, certain banks in the river had arisen from the flow of sewage from the outfalls of the Metropolitan Board. He commented on the whole of the evidence given, and contended that the character of the Thames mud had been completely altered by the introduction of large masses of sewage matter, which had caused it to assume a peculiarly coherent consistency, tending to the formation of banks in the river; and he argued that the dredging operations of the Conservancy Board were not responsible for the obstructions which had lately arisen. At the close of the inquiry the umpire, Sir Charles Hartley, expressed his thanks to the learned counsel engaged in the case for the great assistance afforded by their able arguments, and said that he and the arbitrators would, after having carefully weighed all the evidence, report to the Board of Trade, and, if possible, they would make a joint report. The proceedings then terminated.

At the last meeting of the City Commission of Sewers, Dr. Sedgwick Saunders, the Medical Officer of Health for the City, reported that during the previous fortnight 686 houses had been inspected in the City, of which number nine required sanitary improvements in various particulars; at the markets and slaughter-houses eleven tons of meat had been seized as unfit for human food, including 147 carcases of sheep suffering from "fluke disease." The last number was low, and it might, therefore, be inferred that the epidemic recently so fatal to the sheep-flocks was subsiding. Forty deaths and forty-three births had been registered in the City during the fortnight. Dr. Saunders reported upon a recent verdict by a coroner's jury reflecting upon the conduct of a sanitary officer in the City, and showed that the statements were entirely incorrect in some particulars, and grossly exaggerated in others, and contended that the deductions of the jury were unwarrantable and unjust. The report on this subject was ordered to be printed.

The increasing number of cases in which death has been traced to poisoning by solutions of chloral, and chlorodyne, frequently attributed to "misadventure," has induced Dr.

Hubbard to make some experiments as to the facilities which exist for obtaining these articles, and the result of his labours has been made public. Taking with him one of his children, a little girl under twelve years of age, and selecting a neighbourhood, he sent her into several shops to ask for strong solutions of chloral, and for chlorodyne; in every case she obtained what she asked for without the slightest hesitation or inquiry of any kind. The bottles containing the articles bore no warning that great care was necessary in apportioning the doses, and in every case the Act for regulating the sale of poisons seems to have been totally disregarded. While it is abundantly evident that no law will be sufficient to prevent persons afflicted with a suicidal mania from obtaining well-known poisons, more especially those of the character mentioned by Dr. Hubbard, which are largely employed without the authority of the medical profession, it is certainly highly desirable to place as many restrictions as possible on the sale of these dangerous compounds; and the Act which affects to deal with this subject ought not be allowed to become almost absolutely a dead letter.

Amongst those things which we may sigh for, but seem never likely to realise, is an unadulterated milk-supply. On all hands it would appear to be determined that we shall never be able to feel sure that this inexpensive and necessary food will be allowed to reach us in a state of purity. The retailer sometimes, and we believe justly, lays the blame upon the original supplier; and the Lambeth authorities have adopted the wise precaution of sampling the milk at the Waterloo Railway terminus as it arrives from the farmer, and before it has come into the possession of the retailer. The result has been that a farmer residing at Petersfield was recently summoned at the Southwark Police-court for sending up adulterated milk; the case was adjourned to allow time for him to have a sample of the milk analysed with a view of controverting the evidence of the public analyst. It is needless to say that the analyst's report was confirmed, and it was then asserted that the milk had been tampered with in transit. The magistrate remarked that it was a very bad case. It was almost a daily occurrence for retailers to be summoned to his Court for selling adulterated milk, and in most cases they excused themselves by affirming that they sold it as they received it from the farmer. He fined the defendant £10 and the ordinary costs.

The Bournemouth sanitary authorities set a good example to other local boards by the persistency of their efforts to preserve the health of their locality. Being desirous of acquiring compulsory powers to purchase five acres of land whereon to erect a fever hospital, they have petitioned the Local Government Board to grant a provisional order for that purpose. An official inquiry instituted by the London Board was held last week, when the question of the petition was fully argued, and the inspector, Mr. J. T. Harrison, promised that his report should go forward at an early date. The undertaking, if the necessary sanction be given, will cost the town between six and eight thousand pounds.

In the High Court of Chancery, last week, before the Master of the Rolls, the case of the Attorney-General *v.* Bevington was finally disposed of. This case was one which could not fail, sooner or later, to enlist the attention of the Charity Commissioners; it related to one of the City parochial charities in connexion with St. Mildred's, Bread-street, and until the present scheme was propounded there was a surplus of about £800 a year, after providing for the repairs of the church. By the scheme now introduced it was proposed to divide one-half this surplus among the London hospitals, and the other half in providing exhibitions for children educated in public elementary schools in London, to be held by them in schools of a higher grade, so as not to afford any relief to the rates. The Master of the Rolls confirmed the scheme in the manner proposed.

The State of Connecticut, in America, has seen fit to recognise the importance of dealing with colour-blindness in persons employed on the railways of the locality, and its General Assembly has passed an Act authorising the State Board of Health to prepare rules and regulations for the examination and re-examination of railroad *employés* in regard to colour-blindness and visual power, and prescribing the method in which, and the intervals at which, such examinations shall be made. The Board is annually, in the month of May, to recommend two or more medical experts to make the necessary examinations, and the Governor, on or before July 1 following, is to appoint two of these gentlemen, who will issue certificates. The Act further makes provision for inflicting penalties on any railway company employing a person who is not in possession of a regular certificate of freedom from colour-blindness, or whose certificate shall at any time have been revoked by the examiners. This is a step in the right direction, and one which it is to be hoped will not only extend to the whole of America, but also, in time, to every country possessing railway communication.

The *Times* publishes some interesting records concerning Prussian hospitals. From a report recently issued it appears that in 1877 the total number of hospitals in Prussia was 643. Statistics from 401 are returned, showing that 66 hospitals were to be found in towns of over 20,000 inhabitants, 171 in towns having from 5000 to 20,000 inhabitants, and 164 in the towns of lesser size. The average duration of the patients' stay in the hospitals was thirty-two, thirty-one, and twenty-seven days respectively, in the three categories, and the average cost per day 2s. 2½d., 1s. 7½d., and 1s. 8d., showing that both duration of treatment and daily expenditure were less in the smaller towns. From 212 establishments particulars are given as to the comparative cost of male and female treatment, from which it appears that while women occupied the hospitals for longer periods than the men, their daily maintenance and cost of treatment was less.

It will be remembered that some time since a memorial sun-dial was placed, at the expense of the Baroness Burdett-Coutts, in the disused churchyard of Old St. Pancras, which has been laid out as a public garden. The local authorities, desirous of acknowledging the gift, have presented her with an address expressing their obligations for so handsome a present, and in reply the Baroness has addressed to them a letter, in which she records her feeling of anxiety for the preservation throughout the metropolis of our old burying-grounds. These, she observes, no longer used for their original purpose, had lost the protection of the living without securing the sanctity that should protect the dead. Memorial-gardens seemed to her to provide safe resting-places for the dead, and spaces which offered healthful sources of pleasure to the living.

The large vacant space of ground at the south-west end of the Houses of Parliament, and adjoining the Victoria Tower, which is bounded by Abingdon-street on one side and by the river on the other, is now in the course of being formed into a pleasure-garden similar to those on the Victoria Embankment, and will hereafter be known as the Victoria Gardens. The ground, with the wharf and buildings on it, was bought up in order that the Thames Embankment wall might be extended up the river from the Houses of Parliament to what is known as Dorset Wharf. After the river-wall of that portion of the embankment was finished, it became a question as to how the large space within it should be appropriated. There were strong objections urged to its being

rebuilt upon, in consequence of its close proximity to the Houses of Parliament, which in case of fire would have been endangered. Ultimately it was resolved by the Board of Works to lay it out as a garden, and that resolution is now being carried out.

Dr. Schede, of Berlin, director of the surgical department of the Municipal Hospital, has accepted a call to Hamburg, to succeed the late Dr. Martini in the surgical wards of the General Hospital in that city. The choice is considered a very creditable one to the Hamburg Corporation.

CÆSARIAN SECTION EXTRAORDINARY.

THE *Wiener Med. Wochenschrift*, No. 13, 1880, gives the following anecdote on what appears to be unquestionable authority:—A poor woman at Prischtina, not far from the Servian frontier, was in the pains of labour for three days, but to no purpose. In her perplexity she seized her husband's razor, cut open her abdomen and uterus, and got a neighbour to sew her up again, after the removal of the child! And now, after several months, mother and child are doing perfectly well.

DEATH OF DR. SHARPEY, F.R.S.

WE regret to have to record that Dr. Sharpey died at his residence in Torrington-square on Sunday last, the 11th inst., aged seventy-eight years. There is no need to remind medical men of all Dr. Sharpey's long-continued and distinguished labours. Born in April, 1802, at Arbroath, he was educated in Scotland, graduated at the University of Edinburgh in 1823, and then spent much time abroad, especially in Berlin. In 1836 he was appointed Professor of Anatomy and Physiology in University College, London, and continued to teach there till he retired in 1874. And what British medical man has not profited by, or at least heard of, "Quain and Sharpey's" works? Dr. Sharpey was a Fellow of the Royal Societies of London and Edinburgh, a member of the Senate of the University of London, a trustee of the Hunterian Museum, and a member of numerous learned and scientific societies at home and abroad. We hope next week to give a full notice of his life and work.

ENDARTERITIS OBLITERANS.

AN interesting contribution to the pathological anatomy of visceral syphilis has recently been made by Ehrlich of Berlin (*Zeitsch. Klin. Med.*, I., 2, page 378). In a fatal case of constitutional syphilis the heart was found to contain numerous foci of disease which might be briefly described as "gummata." Some of these masses were of a deep red or hæmorrhagic appearance; others were whitish, or whitish with a hæmorrhagic boundary. The origin of these "gummata" was found by Ehrlich to be endarteritis syphilitica obliterans affecting the smaller vessels—both veins and arteries—in the neighbourhood as well as in the centre of the masses. That the obstruction and finally the occlusion of the vessels had been the primary disease, and was not an effect of the other disease, was proved by the appearance of the muscular fibres within the region of the "gumma," which were uniformly and considerably atrophied. In short, the foci of disease were infarcts—partly hæmorrhagic and partly anæmic.

PROPOSED COMPULSORY VACCINATION AND REVACCINATION IN FRANCE.

IN France they propose to lead Europe in the right way as regards making revaccination as well as vaccination compulsory. The following are the provisions of a Bill brought into the Chamber of Deputies by Dr. Liouville: – 1. Vaccination is obligatory, and must be practised within the first six months of existence. 2. Revaccination is obligatory every ten years, viz., in the course of the tenth, twentieth, thirtieth, fortieth, and fiftieth years. 3. At the time of the registration of the birth of an infant, a certificate for vaccination is to be delivered to the person who declares the birth. This must be returned within six months, specifying the number of vaccine pustules, and signed by a doctor of medicine practising in the commune. 4. The certificate must be presented to the civil authorities every tenth year, stating that revaccination has been performed at each successive period, and specifying the results. 5. Parents and guardians and other persons convicted of an infraction of the above clauses will be liable to a fine of from 1 fr. to 25 fr., and in case of repetition of the offence to a fine of from 25 fr. to 100 fr. 6. The presentation of this certificate of vaccination shall be obligatory on entering any school, whether for primary, secondary, or superior instruction; on joining the army, and on admission into any of the establishments of the State. 7. Contraventions of this clause are punishable in the manner already recited. 8. Civil officers of State will cause to be annually compiled a list of those in their services who have not produced the certificates required during the past year. This will be forwarded to the *juges-de-paix* in order that those who have contravened the law may be officially prosecuted. 9. This law will come into force within the delay of a year after its promulgation.

ATROPINE ECZEMA.

THE remarkable susceptibility of certain individuals to particular drugs, as evidenced by a constant relation between their use and the appearance of eruptions of various kinds on the skin, has of late received much attention, especially in Germany, by Köbner and Behrend. Dr. Julius Donath, of Baja (Hungary), records (*Wiener Med. Wochenschrift*, No. 12, 1880) a case where the introduction of a few drops of a 1 per cent. solution of sulphate of atropia into the eye was invariably followed by severe eczema and pseudo-erysipelatous swelling and redness of the face and neck. The patient was a woman of forty-five, of good constitution, with chronic disease of the left eye giving rise to corneal opacity and synechiæ.

PATHOLOGICAL SOCIETY OF DUBLIN.

AT the meeting of this Society on Saturday, April 10 (Dr. Edward H. Bennett, President, in the chair), Mr. William Stokes showed a specimen of dislocation of the head of the left femur forwards on the pubes. The patient, a man aged twenty-seven years, while asleep fell off the shaft of a cart in motion, and was in consequence severely injured. The index and middle fingers of the left hand were completely smashed. The left lower limb was everted and enormously abducted. Extensive ecchymosis had occurred, but, notwithstanding, a prominence in front of the pubes could be detected. Shortening to the amount of about an inch was present. The great trochanter was considerably depressed—a deep hollow marking its usual situation. Delirium, vomiting, sleeplessness, rapid pulse, and respiration, with moderately high temperature, now set in, proving the precursors of a pneumonia. Reduction was effected by flexing the leg upon the thigh, thus lifting up the head of the femur, then abducting and rotating outwards. The patient unfortunately died suddenly immediately afterwards. There was an hæmorrhagic infarction in the left lung, which was in an early stage of pneumonia. The left femoral vein showed commencing phlebitis. There was a comminuted fracture of the horizontal portion of the ramus of the os pubis. This lesion had been probably caused by the wheel of

the cart passing over the pelvis at the time of the accident. The dislocation was that described by Mr. Cadge as luxation under the crural arch upwards and forwards. In discussing the case from a medical point of view, Dr. Hayden said that, bearing in mind the occurrence of phlebitis and of embolic pneumonia, he considered the cause of the sudden death to have been most likely pulmonary embolism.

NEW STAINING FLUID FOR AMYLOID ORGANS.

Dr. Curschmann, of Hamburg, has discovered that a substance called *methyl-green*, which has been lately introduced into practical histology as a staining medium, has a peculiar affinity for amyloid substance, and colours it an intense violet (*Virchow's Archiv*, vol. lxxix., part 3, page 556). The surrounding tissues, that have not undergone degeneration, are stained green or bluish-green, and the contrast is therefore very striking, whilst the smallest spot of amyloid disease can be readily discovered. Hardly less important than this discovery is the observation that methyl-green colours so-called hyaline-casts (*in situ*) ultramarine blue, so that these also can be readily distinguished in sections of the kidney from the green-coloured tissues around, as well as from the violet amyloid spots in which they may lie. Methyl-green, which can be purchased of any chemist, is used for staining in the form of a 1 per cent. aqueous solution. A few minutes' immersion of a microscopical section in this solution is sufficient; but sharper and more uniform colouration is produced by using a more dilute medium for a longer time. Preparations so made may be mounted in dilute glycerine, but not in Canada balsam, inasmuch as alcohol, turpentine, and oil of cloves quickly discharge the colour.

ABSENCE OF THE PARIETAL PERICARDIUM.

Dr. Hans Chiari, Prosector at the Rudolfs Hospital, Vienna (*Wiener Med. Wochenschrift*, No. 14, 1880), has lately met with a case of this rare congenital condition. The subject of it was a man of forty-six, who died from cirrhosis of the liver, and tubercular peritonitis secondary to old lung disease. During life the only symptom observed connected with the heart was accentuation of the second sound over the pulmonary artery. At the post-mortem, on removing the sternum the heart was found lying quite free in the left pleural cavity, in immediate contact with the left lung, and apparently in its normal relation to the walls of the thorax. The organ itself, covered by the visceral pericardium, was of normal size, and in all respects healthy. The chief peculiarity observed, apart from the absence of the parietal pericardium, was that the left phrenic nerve lay in front of the heart. In this respect Chiari's case resembles those of Baly (London, *Med. Gaz.*, July, 1851), and Weissbach (*Wien. Med. Wochenschrift*, No. 69, 1868), in both of which the heart also occupied the left pleural cavity. In Chiari's case the upper lobe of both lungs had an accessory lobule. The exact details of the derangement of the mediastina, etc., will be found in the original. In spite of its rarity, the above condition is not one of great interest, as its presence has never been detected during life. It probably originates before the second month of fœtal existence.

The French Association for the Advancement of Science.—Mous. B. Brunet, struck with the progress of this Society and with the importance of the results which it has already produced, has just made it a donation of 20,000 fr., to be invested and employed in increasing the number of grants annually made by the Association in order to facilitate scientific investigations by contributing to the cost of expensive experiments and the publication of works on pure or applied science. The Association has just published the list of such grants for the present year, amounting to more than 6000 fr.—*Gaz. des Hop.*, April 1.

THE NURSING SYSTEM IN GUY'S AND THE LONDON HOSPITALS.

The following are authoritative statements, though very short ones, of the method by which nurses were selected and trained, and the nursing generally carried on, in Guy's Hospital till November last, and according to which it is still carried on in the London Hospital:—

Guy's Hospital.—For the past ten years each ward of twenty-four patients has been supplied with a sister, a day nurse, a night nurse, and an assistant nurse, commonly called a probationer. To these must be added a ward-maid to scrub the floors and do what is usually called the menial work of the ward.

All nurses, whether they have served in a similar capacity or not in other hospitals, must, before entering on duty as full nurse, have served a given time on probation at reduced pay, the period of probation varying with the attainments of the probationer; but it was never less than six months.

In the selection of probationers, preference has been given to a good class of domestic servants varying in age from twenty-two to forty; married women, if possible, being allotted to male wards.

While learning her duties, the probationer has not been confined permanently to one ward, but has been moved about from one part of the Hospital to another, in order that she might accustom herself to medical as well as surgical work.

Besides the above staff regularly employed, there have always been retained a number (about twelve) of nurses to do extra or casual duty, six of whom had been regularly trained nurses, and the others acted under the sister and nurse of the ward in which they were placed temporarily.

The sisters have hitherto been selected from ladies in the middle class of life who have had previous opportunities of practical housekeeping, and who were required to serve for a time—six months or a year—under the regular sister before they were finally appointed. They were not appointed before the age of thirty or after forty years of age. The duties were of a multifarious character, as the sister was the medium of communication betwixt the medical officer and the patient, and also in constant communication with the executive of the Hospital. Several widows and daughters of medical men and clergymen have held, and still hold, this office, and all have received an excellent education and are respectably connected.

London Hospital.—The Matron is the head of the nursing department—including the Home for Probationer Sisters and Nurses. Each sister is the head of her ward, subject to the Matron's supervision. The nursing staff proper consists of day nurses and night nurses. Sometimes these nurses are hired after training at other hospitals, but the majority are trained by the sisters in the wards of the London Hospital. They are drawn chiefly from the class of respectable domestic servants who have a desire to engage in nursing, and they are put on probation in different wards to learn various kinds of nursing. At the end of twelve months they are considered to be fairly trained, and are put into the wards as nurses when opportunity offers, and receive the full pay of nurses, but they are called probationers for three years, at the end of which time they can claim a certificate, and leave if they like. All this applies to night as well as day nurses.

The sisters are engaged already trained, or are taught in the Hospital, as circumstances may decide, and are gradually put forward for independent responsibility.

Two sisters are always engaged as night sisters, passing through all the wards of the Hospital, attending to any urgent case or new arrival, and as far as possible relieving the day sisters from being disturbed at night, and of course looking to the very important question of the night nurses being awake and attentive to their duties.

Mr. James Henry Gramshaw, M.D. St. And., of Gravesend, who became a Member of the Royal College of Surgeons of England in 1842, was elected to the Fellowship of the College on Thursday last week.

ON SOME ANALOGIES BETWEEN THE NERVOUS SYSTEM AND THE ELECTRIC TELEGRAPH.

(*From a Contributor.*)

THAT unseen power or force which seems to pervade all space, assuming the protean forms of electricity, heat, light, magnetism, and chemical action, and which is probably involved in the action of gravitation itself, and is thus the moving and sustaining power by which the will of the Almighty regulates the universe—this, it must be, which, modified and energised by transmission through the animal organism, constitutes the nervous influence or fluid, as it is sometimes termed, and is the chief factor in the manifestations of all its vital processes, muscular motion, the senses, and thought itself, with all the reciprocating and sympathetic relations which they bear to each other.

One cannot help at times speculating on the *modus operandi* of this mysterious agent, and I have been lately reading, or attempting to read, a book by Alfred Smee, on the mind viewed in this light, in which he attempts to show, by algebraic, logical, chemical and electrical, diagrams and formulæ, how the various and intricate processes of the nervous system, both in relation to mind and body, are performed. To my mind, his speculations are almost unintelligible, and in most respects, if not absurd, certainly practically useless. The mysteries of the wonderful mechanism of the human body are not to be penetrated in his offhand, make-believe sort of way.

But there would not, I think, be anything presumptuous or unphilosophical in hazarding a few analogies or comparisons between the nervous system and the most modern and important scientific development of electricity—to wit, the electric telegraph,—so as to bring out, if possible, some practical or useful suggestions in psychological therapeutics or pathology.

There are some striking *curiosities of coincidence* between what may be designated the nervous system of the world and that of the *microcosmos*, or little world—our own body.

It is well known that the operations of the electric telegraph are apt to become deranged and unavailable during a thunderstorm; and electricians and telegraphists are also aware that the same result is produced by the occurrence of "magnetic storms," as they are called—silent, invisible commotions, which occasionally take place in the etherial or electrical ocean which envelopes and permeates the world. On these occasions the telegraphists must suspend their work and—unless, indeed, where great danger is threatened to the delicate instruments, they do not sometimes disconnect them from the wires—allow the excited fluid to run along the wires, speaking its own unintelligible language, till its equilibrium, so to speak, becomes restored. Does not this cosmic hysteria forcibly remind one of certain conditions of the human subject, where the nervous fluid, breaking through the restraints of the will and the judgment, overflows its normal course and gives rise to the incoherent and irrational ravings and movements of hysteria, convulsions, and insanity?

The electric telegraph may be, and is occasionally, turned to dishonest and dangerous uses. It may be surreptitiously tapped, and made to transmit untruthful or misleading intelligence, calculated to produce panic, disaffection, disaster, or ruin in the quarter to which it is sent. Though it may not be possible to detect or punish the perpetrator of the mischief, a wire that is liable to be misused in this way can easily be rendered innocuous, by being insulated or disconnected from the battery at each end, according to prearrangement between the two legitimate telegraphists. In like manner, when a nerve, either from some diseased portion in its own substance, or from undergoing pressure, or from passing through a diseased bone, causes some form of neuralgia, a cure of the pain—the chief part of the disease—may be effected by the removal of a portion of the peccant nerve, so as to interrupt the current of nervous influence.

The analogy is quite obvious between telegraphic cables or bands of insulated or coated wires, whether above or below the surface of earth or ocean, and the trunk nerves of the body, enclosing their myriads of nervous fibrillæ, each insulated by its separate coating of neurilemma, for distribution to all parts of the quarter to which they are intended. When the insulation of any of the enclosed wires becomes destroyed through accident, through the erosion caused by some parasitic or extrinsic substance, or through the destructive effects of time, thus allowing the naked wires to come into contact, although the full amount of battery power may be transmitted, it will not give a distinct and intelligible message, but will be dissipated and lost in the collateral wires into which it had found its way, sending weakened, uncertain, and abortive signals through them.

In the thinning and absorption of the enveloping or connective tissues which take place in old age and in certain accidents or diseases which in all probability affect the neurilemma of the fibrillæ either at their origins or within their containing trunks, we may find an explanation of those unregulated and spasmodic movements which take place in some cases of disease and old age. The brain and spinal cord are healthy and efficient, and the mind and will of the patient are normal, but the channels through which their behests are transmitted are defective and run into each other, so as to produce confusion and uncertainty. The minuteness of the structure referred to would probably preclude the truth of this idea being tested by anatomical observation, or even by the microscope.

But to show how completely this hypothesis adapts itself to the explanation of some diseases, I shall quote from "Flint's Practice of Medicine" his description of locomotor ataxia:—

"In proportion as the affection is marked, the patient's gait in walking is uncertain, irregular, and grotesque. The lower limbs are thrown forward by forcible jerks without any defined direction. The body is swayed from side to side in the attempt to maintain an equilibrium, and the arms are thrown out like those of a person balancing on a tight rope. . . . . In other cases the greatest difficulty is experienced in beginning to walk, and, after getting under way, the patient is unable to advance slowly, but walks with precipitation, or falls into a running gait. Notwithstanding the violence of the exertions, the muscular strength being retained, patients are sometimes able to travel long distances. In an extreme degree of the affection, voluntary progression even with the aid of a cane or assistants is impossible, and the patient is confined to the chair or bed."—Page 673.

"The ataxia is not essentially a paralytic affection; the difficulty in walking or in using any of the affected muscles depends, not on deficiency of muscular power, but on the lack of ability to combine and direct the movement of the affected muscles. The difference in this respect between this affection and progressive general paralysis, or the paralysis of the insane, is strikingly shown by causing two patients, one affected with general paralysis, and the other with locomotor ataxia, to walk side by side. The paralytic walks with a feeble, tottering gait; the patient affected with ataxia throws out his limbs with force, but in an irregular, uncertain manner. In progressive general paralysis, the voluntary muscles of the limbs, face, etc., are simultaneously affected; in the locomotor ataxia, different parts of the voluntary muscular system are successively affected, the affection being generally first manifested in the lower extremities."—Page 674.

According to the same author, "The causation of locomotor ataxia remains to be ascertained. The disease has been observed to follow various affections, viz., rheumatism, pellagra, epilepsy, hysteria, syphilis, etc.; but the diversity of the antecedent affections renders it doubtful if the sequence denote any etiological connexion. It has been observed to follow a fall producing an injury to the loins, and a strain from carrying a heavy burden."

Another explanation of the abnormal motions characterising this disease might refer them to some lesion of the cerebellum, which organ is now believed to have the special function of regulating and co-ordinating the motions of the body generally, which it is enabled to do by its junction or anastomosis in the medulla oblongata with the spinal and motor nerves.

In a description given in the *Leisure Hour*, of the central telegraphic station of the new Post Office, London, the following passage occurs, which I give as bearing on the

analogical view of the subject I have been endeavouring to present:—"The centre of the nervous system is the brain, and yet they tell us that the organ to which all sensations are conveyed, and from which all volition emanates, is itself a body without feeling, or nearly so. And so one thinks of the telegraphic brain of London, the central point of the intricate tissue of wires stretching through the air, underlying our feet, and creeping about our office walls. Here it is, a vast space into which, day and night, the whole civilised world is continually flashing brief piercing sentences, and from which they are continually being sent forth again—tidings of births and deaths, of accidents and sickness, of floods and fires, of wreck and ruin—tidings that make brains reel and hearts sicken, or send the blood through the veins bounding and tingling with delight. Yet here they are, these telegraphic operators—a busy hive of workers, nearly all females, about a thousand of them all in one room—some chatting, some taking their tea; the majority transmitting or receiving messages, and all of them apparently as placid and undisturbed by the sensational spasms that they themselves are there to receive and communicate, as though they were engaged in spinning cotton or plaiting straws."—*Leisure Hour* for September, 1876, page 635.

The analogy between the action of the senses and the different modes in which telegraphy is conducted is very obvious and striking. One instrument, styled the "sounder," like the ear, takes cognizance of sound, and by a combination of taps, varying in their rapidity, can be readily understood and read by the expert. The Morse or ribbon instrument, and the Wheatstone automatic, like the touch of the hand, write down on an endless paper ribbon, kept moving under its pen, the intelligence they have to convey in the shape of letters formed of a series of dots and dashes. Again, the needle instrument, like the eye, gives instantaneous intelligence, by the motion of a poised or suspended magnetic needle vibrating between two points. The same influence—that is, the nervous in the one case and the electric in the other—produces the different effects, sight, hearing, touch, according to the instrument or apparatus through which it is transmitted.

A further analogy between the action of the brain and the telegraph is that the knowledge conveyed by the ribbon or the Wheatstone automatic instrument, after being made immediate use of, may be, and generally is, stored up, so that it can be referred to at a future time if required. This artificial memory of the telegraph, though more faithful and minute even than that of the brain itself, is practically limited as to time from the amount of space that would be required for the storage and arrangement of a large mass of material. This analogy is suggestive in some respects, and may help us a little better to understand the mysterious operation of the human memory, with its vast amount of storage, so to speak, and the facility with which it can be brought into use. By means of the magical threads of association which run through the bundles of phrenographed ideas lying latent in the brain, scenes, occurrences, and information may be brought to recollection that had been unremembered for many years; and some gifted men can (as Lord Macaulay is said to have done) remember and repeat a long poem after having once read it over.

The sudden and unguarded transmission of telegraphic intelligence from a powerfully charged battery, or, as occasionally happens, from the passage of terrestrial electricity through a wire, will sometimes fuse and destroy the delicate mechanism of an instrument and render it useless till repaired. In like manner, in the human subject, the shock caused by sudden and unguarded intelligence will cause either instant death or apoplexy, by some change, probably produced on the delicate mechanism of the brain or the nervous centres.

Another and a singular coincidence between the nervous and the telegraphic systems is that both are in many respects similarly affected by the state of the weather. In bright, dry, and frosty weather the telegraph works powerfully, while in damp, foggy, and rainy weather its action is so feeble that the transmission has often to be made, for the sake of renewing the battery power, by a series of leaps, as it were, or interrupted circuits, from station to station. We all known that the human nerves are affected in a somewhat similar manner by variations of the weather.

To the system of involuntary or automatic actions, which, through the agency of the great sympathetic system of nerves, are constantly going on in the animal economy, and by which, in fact, its life is sustained, an analogue may be found in the electric telegraph, although it has not yet had time to be developed to the extent to which it undoubtedly will be in the future. In all the chief towns and observatories in this country true time is automatically pulsated, second by second, from the central heart in Greenwich or London; and in some cases, at a given hour, it is audibly indicated through a circuit of miles around. Warnings of housebreaking, and of danger from fire or from water, can be instantaneously and automatically sent to those whose interests are affected.

During the intervals that occur in the occupation of, say, two telegraphists placed *vis-à-vis*, and at distant stations (perhaps hundreds of miles apart), they have sometimes to exchange *asides* in connexion with their correspondence, or they may be tempted to snatch a chat with each other, especially when, as sometimes happens, from having long shaken hands with each other in the spirit, though not in the flesh, they may be said to have become pretty intimately acquainted. On these occasions, instead of the ordinary telegraphic language, they often make use of even a more rapid and suggestive code of signals, expressive of the feelings and emotions, such as anger, laughter, astonishment, regret, approval, delight, fear, interrogation, suspicion, thanks, scolding, kissing, etc. These ideas are expressed not in the regular way of letters and words, but transmitted through the sounder by a conventional or mutually understood articulation of taps—a succession of notes and intervals grouped and toned in such a way as to give even to an uninitiated ear the very idea intended to be conveyed.

On hearing a specimen of this kind of language at a lecture by a telegraphist, I was forcibly reminded of the natural language of some of the lower animals, such as the chattering of monkeys, and of parrots, crows, or jackdaws, and strengthened in the idea that *they* too may have a similar language among themselves, which they as readily understand and appreciate as our telegraphists do theirs.

Some of the most curious and astounding analogies between the electric telegraph and the nervous or physiological system are those displayed in the recent inventions of the telephone and the phonograph. The former consists of two wire-connected instruments—a transmitter and a receiver—which are nearly identical in construction. The transmitter or sender is a trumpet-shaped wooden tube or "ear" six or seven inches long, into the open or expanded mouth of which is inserted a disc (*membrana tympani*) of thin sheet-iron, two or three inches in diameter, whose tension can be regulated by screws. Inside the tube, and touching the centre of this disc by means of its prolonged extremity (*ossicula auditus*), is a small straight artificial magnet, the end or pole of which nearest the diaphragm is surrounded by a coil or helix of the connecting wire, which need not even be charged by a battery, but may simply be in connexion with the earth at both ends. Words and sounds, more especially if in musical sequence, can be transmitted and reproduced in a low tone, but in all their pitch and quality, through a distance of many miles by means of this arrangement. The *rationale* or explanation is presumably as follows:—The words or sounds communicated to the transmitting instrument by the vibrations they produce in the air, cause corresponding vibrations in the iron disc on which they impinge, which are thus communicated to the magnet in contact with it. The motions of the magnet, whether molecular or integral (mechanical), or both, cause a corresponding variation (in accordance with a well-known law in electro-dynamics) in the intensity of the magneto-electricity sent along the wire, and thus a correlative series of vibratory results in the disc of the receiving instrument, effects which reproduce a series of vibrations in the air—vocal and articulate vibrations, as we may call them,—thus giving rise to a faint but strikingly accurate echo of what was transmitted through the sender.

Dr. Graham Bell, the perfecter, if not the inventor, of this instrument, states that it was by a patient study of the construction of the human ear that he was led to this curious and wonderful invention; and undoubtedly it has every indication of being as close a copy or analogue of the ear as possible.

(*To be continued.*)

FROM ABROAD.

The New Chair of Pathological Anatomy at Paris.

M. Jules Ferry, the Minister of Public Instruction, after tacking his clause No. 7 on to a Bill with which it had nothing whatever to do, and thereby arousing in the country a religious strife the ill consequences of which cannot be foretold, has now entered upon a passage of arms with the Paris Faculty of Medicine. Some mouths ago it seems that he made a tour of inspection of all the establishments which come under his control, and among the others the Hôtel-Dieu was visited. In this, according to the *Gazette Hebdomadaire* (March 19), the new laboratory of pathological anatomy attached to the chair of Clinical Medicine especially attracted his attention. He was informed of the ample provision which had been made for the practising of autopsies before a large audience, and for making the necessary examinations of morbid specimens, as well as of the expense which the construction and furnishing of such a laboratory had entailed. But great was his surprise, on entering the laboratory, to find, instead of numerous pupils listening to the words of an enlightened master, and working under his direction, that the Director himself was the only person present; and still greater was his astonishment in hearing from him that not a pupil had been put to work under him, and that as yet the laboratory had not been utilised as a school for practical instruction or a place of public teaching. The Director of the Laboratory informed the Minister that he had some intention of resigning a post in which he had nothing to do, and contrasted this state of things with the organisation for the teaching of pathological anatomy which prevails in the German universities. The Minister declared his intention of remedying so conspicuous a defect, and in the Bill of the Budget for 1881 he demanded the allocation of the sum of 27,000 fr. for the foundation of a chair of Practical Pathological Anatomy at the Hôtel-Dieu—a sum which, we believe, was voted by the Chamber before its prorogation. The preamble to this demand states that the teaching of pathological anatomy at the Faculté de Médecine of Paris is, before all things, theoretical, and the daily practice of autopsies and the demonstrations relating to them are the subjects of no regular course of lectures. Still, nothing could be more useful to students than to learn pathological anatomy *de visu*, this being the scientific basis of medical teaching. In all foreign faculties, and in several of those of France, the Professor of Pathological Anatomy performs himself the autopsies in the presence of the students. It has therefore been thought necessary that in the Faculty of Paris, frequented by such a large number of students, this fundamental chair should be doubled, in order to comprise the practice of autopsies and demonstrations and the direction of the laboratory attached. This chair, which can only prove fertile in a large hospital, will be instituted at the Hôtel-Dieu, the laboratory of which leaves nothing to be desired.

Now, this may be a desirable addition to the teaching power of the Paris school or not; but at least it is a surprising step for a Minister to have taken *proprio motu*, without having consulted the Faculté de Médecine on its propriety or opportuneness. That important body was, in fact, treated with what can only be called such insolent indifference that it only learned the existence of such a project, like everyone else, by the perusal of the Minister's speech in the newspapers. So extraordinary was this proceeding, that the *Union Médicale* does not hesitate to declare that it has been put into force at the instigation of the intended occupier of the Chair, which will be in the gift of the Minister. However this may be, it is universally felt that any ameliorations in the mode of teaching pathological anatomy ought to have been made a matter of serious deliberation, and not dependent upon the mere crude suggestions of ministerial power. There seem to be also many difficulties in the working of a chair such as that contemplated, coming into collision, as it would, with the clinical professorships, to which the performance of autopsies is a necessity. In the opinion of many, practical instruction in this art, as well as in the histological examination of the specimens derived from its execution, is amply provided for in Paris at the present time. The Faculty immediately appointed a committee consisting of Profs. Hardy, Le Fort, Lasègue, Verneuil, and G. Sée (reporter), to consider this project of founding the new chair; and the conclusions at which the committee arrived after deliberation—first, that such a foundation would be useless; and secondly, that it would be dangerous—were unanimously accepted by the twenty-eight professors who were present. The minutes of the meeting and the report of the committee were at once forwarded to the Minister of Public Instruction.

Dr. De Rause, in the *Gazette Médicale* (March 20), while sympathising with the Faculty in its natural susceptibility to such an offensive procedure, observes that that Body is, by its organisation and its traditions, somewhat too conservative—reforms, even of the most useful character, having been encountered by it not only with indifference, but opposition; and it may be perhaps from a knowledge of this disposition, and in order to avoid the delays which have occurred on similar occasions, that the Minister has not consulted the Faculty. This is the more likely, as this body had already given some indication of its opinions. Two years since, M. Charcot, the Professor of Pathological Anatomy (who, although the most affected by the ministerial proposition, is, it is said, the one of the professors who is least opposed to it), requested that the two laboratories at the Hôtel-Dieu and La Charité should be placed at his disposal. This request was refused, so that for his practical demonstrations the Professor of Pathological Anatomy has to seek for specimens here and there, some of these reaching the Faculty much damaged by transport. Refusing the two laboratories which were asked for by Prof. Charcot, the Faculty implied that the practical and technical teaching of pathological anatomy was sufficiently provided for in them under the direction of the clinical professors and directors of the laboratories; but it can scarcely be a matter of surprise that the Minister, meeting one of these directors having nothing to do, saw at once that there must be something wrong in the organisation in force. It was the duty of the Faculty itself to see that his laboratory, according to its destination, was employed for the practical instruction of students, and, in case of administrative difficulties arising, it should have represented them to the Minister, in order that they might be remedied. It is evident that a reform in the mode of teaching pathological anatomy is needed; but that does not prevent the one arbitrarily determined upon by the Minister being objectionable.

Foot-Binding in China.

The *Philadelphia Medical Times*, January 31, contains an abstract of a paper read before the College of Physicians on this subject, giving some of the horrid details of the barbarous practice. Among those who can afford it, the first binding takes place at the age of from five to seven, it being necessary that the child should learn to walk and perform certain acts in which walking is necessary before the procedure is commenced. Circumstances may cause it to be delayed until the age of twelve, fourteen, or even twenty; but the suffering thus produced is then extreme, while the result is less complete.

The first step is the bending of the four smaller toes under the sole of the foot, and the narrowing of the parts supported by the metatarsal bones. The next consists in the forcing together of the plantar surface of these bones, whereby they are subjected to a continuous pressure, and an attempt at opening of the articular crevices of the instep, keeping their ligaments at the same time constantly tense. The last step can only be accomplished on the young subject, and consists in forcing the os calcis and astragalus downwards until the heel is vertical, and its bone in a line with the bones of the leg. The os calcis is rounded in form, losing its processes which are so marked in the normal bone; and its anterior articulating face is brought up near to the high, instep-like arch just in front of the ankle-joint, while at the same time the point of attachment of the tendo Achillis is made the base upon which the girl stands when erect, and steps in walking.

The operation is begun by placing the end of a long narrow bandage on the inside of the instep, carrying

it over the four smaller toes, taking them under the foot. After several turns, the bandage is turned so as to compress the foot longitudinally. The child is so left for a month, and when the foot is then opened the skin is often found ulcerated or gangrenous; and one or more toes are not infrequently lost. The shaping of the foot by the bandage requires from two to three years, during which period there is more or less pain. This is most severe in the first year, and gradually diminishes after the bending of all the joints is completed. During this period, and in fact throughout life, the feet are unbound but once a month. The suffering at first is very severe. At night the girl lies across her bed, putting her legs over the edge of the bedstead, so as to make pressure under the knees to benumb the parts below them. In this position on her back, swinging her legs backwards and forwards, she passes many a weary night. Febrile disturbance is said to be an accompaniment of this torturing process. If the feet are firmly bound, and the girl young, they will generally cease to ache in about two years, the parts being then denominated "dead." By this time the calf of the leg, for want of use, has disappeared, the skin is dry and shrivelled, and the whole extremity below the knee presents an atrophied and shrunken appearance, being little more than skin and bone. The bones eventually become attenuated, and the ankle measurement of a dwarf-footed woman is about the same as that of her wrist. In adult life the leg frequently becomes rounded and enlarged by adipose deposit, and the muscles regain their form in a measure; but the ankle always remains small. The binding process is said to exercise a markedly depressing influence upon the emotional character of its subjects, which lasts through life and is very characteristic.

Académie de Médecine.—At the meeting on March 23, the Academy elected Prof. Léon Colin, of the Val-de-Grâce, into the section of Hygiene and Legal Medicine by the votes of fifty-six of the eighty-six academicians who were present. The Secretary also read an extract from the will of Madame Louis, widow of the great clinical observer, who, in execution of the last wishes of her husband, left to the Academy a sum of money sufficient to found a triennial prize of 3000 fr. for a therapeutical subject. The subjects for the first three prizes were designated by Louis himself, viz., the Action of Mercury, the Action of Nitrate of Potash, and the Action of Digitalis.

Maceration of the Fœtus.—In one of his clinical lectures (*Gaz. des Hop.*, January 27), Prof. Depaul observes that at the present day we readily admit that the death of the fœtus *in utero* need in nowise compromise the health of the mother; but some thirty years ago a frightful picture was still drawn of the effects of such an accident, and the idea has not yet quite disappeared from the mind of the public. Indeed, such fear does the death of the fœtus sometimes cause in a family that it is necessary to take precautions in announcing it. This comes from confounding maceration with putrefaction, although they entirely differ from each other. Putrefaction occurs when the contact of air gives rise to changes in the tissues contained in the uterus, and may develope very serious symptoms, as, for example, when the membranes are not expelled after an abortion, and become putrefied. But the infant being enclosed in a double sac, the air cannot gain access to it; and, instead of putrefaction, maceration results. Sometimes the dermis of the infant is raised into ampullæ, whence exudes a sero-sanguinolent liquid that gives to the amniotic fluid the colour of wine-lees, which is rendered still darker by the meconium that is expelled on the relaxation of the sphincters just before death. It would seem that some of this liquid is absorbed, as it is diminished in quantity, while its colour becomes as dark as coffee-grounds. On analysis, blood in an altered condition and the elements of the meconium are discovered. An infant may remain in this state within the uterus for some months, especially in twin pregnancies, when one of the infants compressing the other, causes it to become flattened and atrophied so as exactly to resemble a little gingerbread figure. These details may prove of importance in legal medicine; for when a woman has been accused of infanticide it may be shown that the infant has been dead for some time from disease of the placenta or from other causes.

REVIEWS.

Mind in the Lower Animals in Health and Disease. By W. Lauder Lindsay, M.D., F.R.S.E., F.L.S., Honorary Member of the New Zealand Institute. London: C. Kegan Paul and Co., 1, Paternoster-square. 1879. Two volumes. Pp. 543 and 571.

Amongst that section of the busy world who have time to indulge in the rudimentary study of science and literature, perhaps the greater number are attracted by the subject of natural history. There is undoubtedly in the human mind a strong desire to become acquainted with well-authenticated anecdotes of the instinct of our domestic animals, which in many cases seems almost allied to reason; but we question whether the great bulk of Dr. Lauder Lindsay's readers will be prepared to accept the views expressed in the two volumes under notice. It is somewhat startling, for instance, to be gravely told that the whole animal world is as much endowed with mind and reason as the so-called superior animal man, and that what, up to the present time, we have erroneously termed instinct, is, in fact, nothing less than reasoning power. The strong point of Dr. Lindsay's arguments in favour of the animal creation is unquestionably the utter incompetence of any human being to contradict them with any degree of certainty; thus, when we are informed that "bees give each other information of their projects," or "that each species of ant has its own language," the assertions are beyond the bounds of authoritative contradiction. We may, however, safely assert that Dr. Lindsay has spared neither time nor trouble in the investigation of the subject he has undertaken, and if we cannot quite endorse all his views as to the superiority and equality of the animal creation when compared with human beings, we can at least affirm that every page of his work inculcates consideration and kindness for those creatures which were given for the use and companionship of man. The anecdotes and illustrations of the peculiarities of "birds, beasts, and fishes," plentifully scattered throughout the two volumes, will make them pleasant reading to the superficial reader, who, at first sight, might hesitate before entering into such a recondite question; and to the more critical Dr. Lindsay has appealed in his introduction, in which he says, "I do not expect those who approach the subject from very different points of view to accept either my facts or my inferences; or, assuming that the facts are accepted, I cannot hope that other students will draw the same conclusions or form the same opinions. I have no wish to thrust my own views dogmatically on any reader."

The Secret of a Good Memory. By J. Mortimer-Granville. London: David Bogue, 3, St. Martin's-place, Trafalgar-square. 1880.

This little book of Dr. Mortimer-Granville's is not so much addressed to those who have no memory as to those who wish to cultivate and improve such memory as they may already possess. The two agents relied upon to effect this are sight and sound, and the purpose of the work is to show how the faculties employed in memory may be tested, and their strength or weakness ascertained, so that the method of culture pursued may be in harmony with the law of nature. The author explains that he is almost tempted to claim originality for the ideas he has put forward; but he refrains wisely, since it can hardly be disputed that the agency of sight and sound in stimulating our memory to recall far-away incidents and objects is no novelty. A system of artificial memory is—well, perhaps it is better than no memory at all, but it is terribly apt to be misleading.

Sixth Ophthalmological Congress.—The Ophthalmological Section of the International Medical Congress, which met last year at Amsterdam, resolved unanimously that the next Ophthalmological Congress should be held in Italy, and Prof. Snellen, the President of the Section, confided to Prof. Quaglino the task of ascertaining which city would be the fittest for this purpose. Milan has been fixed upon, and the Congress will be held there during the first four days of next September. Particulars will soon be issued. In the meantime letters may be addressed to the Committee of Organization, 13, Via St. Andrea, Milan.—*Gaz. des Hop.*, March 25.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, MARCH 23.

JOHN E. ERICHSEN, F.R.C.S., F.R.S., President, in the Chair.

ON THE ESTIMATION OF URIC ACID BY ITS REDUCING ACTION UPON THE AMMONIATED CUPRIC TEST.

DR. PAVY contributed a paper on the above subject. The author first referred to the importance of being able to determine readily and with precision the amount of uric acid voided, for the purpose of studying the conditions which tell favourably and unfavourably upon the uric acid diathesis, and as a guide to treatment during the management of a case in which the uric acid deposit occurs. The old methods of estimating uric acid could not be spoken of as meeting the requirements of the medical practitioner either as regards facility of application or precision. The method which the author desired to bring before the notice of the Society is founded upon the reducing action which uric acid, like sugar, exerts upon the oxide of copper. The ordinary form of copper test is most susceptible of application to the purpose, but the ammoniated cupric liquid which the author has recently introduced (*Proceedings of the Royal Society*, vol. xxviii. p. 260, and vol. xxix. p. 272) for the quantitative determination of sugar is perfectly available. With this test the reduced oxide instead of falling as a precipitate is held in solution by ammonia and a simple decolouration of the liquid occurs as the reduction proceeds. The mode of preparation and employment of the test having been described, it was stated that the results obtained from observations conducted with known quantities of pure uric acid so closely harmonised with the expression that three atoms of oxide of copper are reduced by one atom of uric acid, as to justify this formula being adopted as the basis of calculation for the process. For the determination of the uric acid in a specimen of urine the reducing power was taken before and after treatment with acetate of lead. The first or total reducing action is in part due to uric acid, and in part to the small amount of sugar which urine naturally contains. The addition of acetate of lead effects a precipitation of the uric acid, and the reducing power thus obtained represents the reducing power of the urine *minus* that of the uric acid it contained. By the difference between the two determinations the amount of uric acid is ascertained. The mode of calculation was given. Results were furnished showing the precision with which known quantities of uric acid added to urine are revealed by the process. To be certain that what was taken as expressing uric acid was in reality due solely to the presence of uric acid, the process had been checked against the actual collection and subsequent determination of the uric acid. Results were first given to show that the collection and subsequent determination of uric acid can be carried out in a manner to afford reliable information, and then the two processes—the determination from the difference in the reducing power before and after precipitation with acetate of lead, and by actual separation of the uric acid and its subsequent estimation—were applied to various specimens of urine and the result compared. The figures obtained presented a close accord and justified confidence being placed in the results derived from the process brought forward. The author thus concluded his communication: This completes what I have to say about the process I have described for the estimation of uric acid. The next matter to deal with is the results obtained by its application to the urine under various conditions of health and disease. This is a matter of some magnitude which I must reserve for the subject of a future communication, but I may here state that, according to the observations I have conducted, the figures that have been hitherto given as representing the amount of uric acid present will have to undergo considerable alteration.

The PRESIDENT pointed out that the deposit of uric acid was independent of its total amount. Would the process suit for uric acid in the blood?

Dr. PAVY said this had not been tried, but he would extend his researches.

Dr. SILVER congratulated Dr. Pavy on the value of his various researches, but asked would this process enable us to determine the existence of uric acid free from uric acid in combination. If it could be applied to the blood it would be a great improvement on Dr. Garrod's crude test. Difficulties he thought might arise, say, from the presence of bile or matters which would have a reducing action on copper.

After some further observations by Sir Henry Thompson and Dr. Reginald Thompson,

Dr. PAVY proceeded to reply. He said that the test applied to uric acid whether free or combined. Urates might be distinguished from uric acids by their physical properties. He did not think that uric acid existed free in the blood. The bile-acids had no reducing effect. He then demonstrated his process.

After the reading of Dr. Pavy's paper, Sir HENRY THOMPSON proceeded to give some account of endoscopy as relating to the bladder, and to demonstrate the use of an instrument invented by Nitze and manufactured by Leiter of Vienna, which gave results better than any he had ever seen. He was no great believer in the use of the endoscope, holding that one ought to trust mainly to the sense of touch; but in connexion with such morbid conditions as villous growths of the bottom of the bladder the present instrument would be of great service. It consisted essentially of an electric light produced by a Groves' battery, the illuminating arc being kept cool by a stream of cold water, which left the luminosity unaffected. Sir Henry then showed the use of the instrument on a patient.

CLINICAL SOCIETY OF LONDON.

FRIDAY, APRIL 9.

E. HEADLAM GREENHOW, M.D., F.R.S., President, in the Chair.

SYMPATHETIC OPHTHALMITIS SETTING-IN THREE WEEKS AFTER EXCISION OF THE EYEBALL.

MR. NETTLESHIP read notes of two cases which had occurred in his own practice, and of a third case communicated to him by Mr. Cowell, and alluded to six other published cases. The first case occurred in a phthisical man, aged twenty, upon whose eye the operation of extraction of a fluid shrunken cataract with corneal nebula, the result of ophthalmia neonatorum, had been performed. Intra-ocular hæmorrhage occurred forty-eight hours afterwards. The eye was excised ten days after the operation, no sympathetic symptoms being then present, and the orbital parts healed as usual. The excised eye was examined microscopically; inflammatory changes were found in the choroid, optic nerve, and retina, but the ciliary nerves showed only doubtful changes. Twenty-two days after excision (thirty-two after the cataract operation) the sympathetic disease began with failure of sight. When seen a week later there was neuro-retinitis, and shortly afterwards severe irido-cyclitis set in. The eye became glaucomatous, and, in spite of a free iridectomy made six months after the onset, it finally became blind. A prolonged mercurial course, with cod-liver oil, etc., and all the useful local measures, had been first tried. The second case was that of rupture of the sclerotic in a man aged sixty-seven. He was seen one hour after the accident. There was blood in the anterior chamber, but good perception of light. The wound was united with a suture and ice applied. The eye became inflamed, and was excised nineteen days after the accident (the patient having refused excision when advised a few days earlier). There was no microscopical examination. The orbital parts healed as usual. Twenty-three days after excision (forty-two after accident) there was some pain in the other eye, and on the twenty-ninth day acute iritis, followed in a week by extensive detachment of retina. The eye recovered in two months, and six months later was as good as before, the retina having become reapplied. In the third (Mr. Cowell's) case, a boy, aged eleven, had a jagged wound near the corneal margin, with adhesion of iris, followed by softening of the eye and purulent cyclitis. Excision was performed twenty-four days after the accident, and the parts healed as usual. Inflammation of the other eye began about twenty-five days after excision (fifty after accident), and the boy went through a sharp attack of iritis. Numerous adhesions formed, but the eye recovered fair sight (No. 14 Jaeger). Only six published cases were known to the author, viz:—One by Pagenstecher: first interval (*i.e.*, between injury and enucleation), twenty-seven days; second interval (*i.e.*, between enucleation and onset of sympathetic

inflammation), eight days; eye lost. One by Mr. R. B. Carter: first interval, fifteen days; second, forty-one days; recovery. One by H. Schmidt: first interval, twenty-eight days; second, four days; recovery. One by Colsmann: first interval, forty-two days; second, "a few" days; recovery. One by Hugo Müller: first interval not stated; second, five days; recovery. One by Mooren (doubtful): first interval not stated; second, two or three months. The cases were of practical importance, and of interest from the light they throw on the mode of origin and rate of transmission of the morbid action in the production of this disease. It might be a question whether the sympathetic disease in these cases was set up by the damaged eye or by the operation for its removal. If the latter, then we should expect occasionally to see it coming on at very long intervals after excision, and this had not been observed. It would probably be equally severe as the ordinary cases, whereas of the nine cases six are known to have recovered; and we should expect some inflammation of the orbital parts to occur between the excision of the damaged eye and the onset of disease in the other, and this had not taken place. Doubtless the process always started from the damaged eye, and had in such cases as these already, before excision, travelled so far beyond the exciting eye as to be out of the surgeon's reach. The mildness of the induced disease in most of the cases quoted shows, however, that removal of the exciting eye, even after its excitant influence has begun to travel, may be of some use by preventing its further action. An interesting point was that the sympathetic disease appeared to begin as neuro-retinitis in no less than four of the nine cases; but this did not necessarily point to the optic nerve as the path along which the disease travelled, for inflammation of the ciliary nerves at their entrance into the eye, leading to choroiditis near the optic disc, would sufficiently account for the appearance noticed.

After a few remarks from Mr. Spencer Watson,

Mr. Howard Marsh proceeded to read the next paper,

On some Cases of Bone-setting.

No. 1: A countryman, aged fifty, dislocated his shoulder. The dislocation was at once reduced, and the arm bandaged to the side. Nine weeks afterwards he came to London for advice. It was found that the limb was so stiff that he could not move the elbow more than two or three inches in any direction, any movement either on his part or during examination producing great suffering, and he complained of constant severe aching from the shoulder to the elbow. It was noticed, however, that the joint was quite free from heat and swelling. When he had taken gas the scapula was fixed and the humerus was freely rotated on its long axis in the glenoid cavity, and then carried by a series of short jerks through all its normal range of movement. Numerous adhesions around the joint were felt to give way. He now lost much of his pain, and could move his arm freely except in an upward direction. A fortnight after, his arm was carried, while he was under gas, freely above his head. After this all his pain ceased, and he recovered the full use of his limb. No. 2: A man, aged twenty-four, in jumping from a cart, twisted his foot under him. Great pain and swelling followed, and the limb from the instep to the middle of the calf came out "all black and blue." He was laid up for a fortnight, and then took to walking with a stick. Eight months afterwards he came to St. Bartholomew's Hospital. The joint was still swollen, and the seat of severe pain if weight was thrown upon it. He had gone from hospital to hospital, and had been liberally supplied with bandages, elastic stockings, liniments, and the inevitable tincture of iodine, but he got no better. The ankle was found free from unnatural heat—indeed it was unnaturally cold; the skin was bluish and shining, and the outlines of the joint were obscured by brawny swelling. The limb was a little drawn up, and flexion and extension were almost entirely lost. He took gas, and the joint was carried in short jerks through all its natural range. Numerous adhesions in the sheaths of the surrounding tendons were felt to give way. Within an hour he walked freely about the ward, and the next morning walked from Hackney to the hospital, and reported himself fit to go to work on the limb. Six months later he came again, with the ankle again out of order. He said he had been quite well till three weeks before, when the joint had become painful and weak. On inspection nothing could be found amiss, and he was advised to have the part strapped, and to rest it. He, however, said he was sure if it were "moved" it would be all right. Gas was given, and the joint was carried into full extension and full flexion. Some slight adhesions were felt to give way. He wrote next morning to say that he had been walking on the limb, and found that he could now do so without either pain or limping. No. 3 was of a similar character. A man, aged forty-five, could bear no weight on his ankle nine months after a severe strain. The joint was quite free from heat. All his symptoms disappeared when the ankle was flexed and extended under gas, and in less than a week he was quite well. No. 4, a lad, aged seventeen, of strumous family, was reported to have hip disease. He could bear no weight on his limb, and his thigh was flexed, abducted, and rotated outwards. There was deep-seated pain at the back of the joint on any movement, and tenderness on pressure in this situation. There was no swelling. On examination it was found that the hip-joint was sound, but it was believed that there was strumous periostitis of the innominate bone beneath the external rotator muscles. He was told to rest, to have a course of blisters, and to take cod-liver oil. Three months later, as he was no better, he was taken to a bone-setter, who moved the limb. After this he lost all his "pain," and in a week was "all right." Just twelve months later, having in the interval been well, he was, on rising quickly from his chair, seized with the old trouble. He had great pain and felt sick, and the limb became instantly painful if any weight was thrown upon it. On examination the limb was flexed, abducted, and rotated outwards. Movement at once produced painful spasmodic contractions of the muscles, and there was excessive pain on pressure over the sciatic notch. He was put under gas, and the limb was quickly carried through its complete range of flexion, extension, abduction, adduction, and rotation. Directly afterwards, though nothing seemed to give way or to slip, he lost his pain, and could freely move his limb. He has had no relapse. While the preceding cases were examples of adhesions, this, Mr. Marsh believed, was one in which one of the external rotators of the thigh had slipped out of its place. He remarked that he had brought the subject of bone-setting forward because, undoubtedly, there were a numerous set of cases which forcible movement could speedily cure, but which had not hitherto been treated as commonly as was advisable by this means. These cases, as they made but little progress under the routine treatment of rest, liniments, and elastic stockings, frequently fell into the hands of bone-setters, by whose manipulation many of them were cured. He alluded principally to cases in which adhesions had formed, in and around joints otherwise sound, as the result of injury or inflammation. Sir James Paget was the first to draw attention to this subject in a clinical lecture given as long ago as 1867, and since published in the first and second editions of his "Clinical Essays and Lectures." In this essay the principles of forcible movement as a means of treatment were very fully and clearly laid down, and were rendered all the more distinct by being brought into contrast with those which regulate the use of perfect rest, so essential for joints which were the seat of inflammations, and especially of strumous disease. Displacement of cartilages and slipped tendons might be, and doubtless sometimes were, put right by bone-setters, but he believed the cases of adhesions—especially when they occurred after an injury, outside a joint which itself was healthy—offered by far the most numerous instances of improvement after forcible movement, and he expressed his conviction that they were much more frequent in practice than many had supposed After referring to the classes mentioned by Dr. Hood in his Lectures, the author stated that all he had observed led him fully to accord with the teaching of Sir James Paget—that when joints after injury had remained stiff, "weak," and painful, and yet free from abnormal heat, beyond the usual period of convalescence, when they had no history of any previous disease, and when a careful examination could detect no evidences of any of the diatheses, such as struma, or severe gout or rheumatism, the patient should be put under gas, and the limb should be carried in all directions through its full range of movement. As to the movement of particular joints, the author had seen good results in the shoulder, the finger-joints, the knee, and the ankle. He had not used the method in either the elbow or the hip, having met with no cases which seemed suitable for it. In conclusion, he stated that if synovitis had been present, movement must be very cautiously employed. In two knee cases lately under observation, in which synovitis had subsided for eight or nine weeks, and the joints had become perfectly free from swelling and abnormal

heat, a renewed attack of inflammation, with heat, pain, and considerable effusions, had followed manipulative treatment.

Mr. Hulke said the subject was interesting, for these cases were often an opprobrium to surgery; for surgeons dared not risk to do what bone-setters would, as these latter usually contrived to get a written indemnity beforehand for any damage that might be done. Then they would promise everything. He mentioned the case of a lady who had hip disease, and to whom he recommended a ring cushion to relieve pressure; but she was not satisfied, and applied to one of these bone-setters, who persuaded her that she had a dislocation. In his own case, when a joint had been for a time at rest after injury, a sudden fall seemed to restore him to perfect motion.

Mr. John Wood said that there were often adhesions outside the joint, especially the shoulder-joint, after injury, and these were the most successful in the hands of bone-setters. And there was something very like these arising from inflammation of the bursa outside the deltoid, which might be cured by means of manipulation or acupuncture. Where there were changes in the cartilage, the joints were less amenable to treatment; and in many cases where there was supposed displacement of tendons there was really inflammation of the sheaths. He had seen much mischief done by bone-setters, especially in hip disease, where forcible movement was extremely dangerous; and he had also known of fracture of the neck of the humerus caused by them. He would therefore in all cases deprecate quick jerks; he would try first the range of movements possible, and then gradually increase them. When the cartilages were gone, not much good could be done. Many of the cases where bone-setters were supposed to succeed were what are called hysterical spines. In some of these there might be displacement of one or other of the smaller dorsal muscles.

Mr. Thomas Smith thought that many cases of stiffness after the union of a fracture were due to adhesions outside a neighbouring joint. One of the most troublesome set of cases was that following Colles's fracture of the radius, where there were often adhesions of the tendons to their grooves or to their sheaths. Here flexion with friction and shampooing often did good. Wrenching, again, often did good in stiffness of the ankle after fracture of the leg. He could hardly agree with Mr. Wood's ideas as to displacements of the spinal muscles.

Mr. C. Heath referred to a special class of cases where there was bruising of the parts in the neighbourhood of a joint, as in falls on the shoulder in the hunting field. This would not put those right; movement, more or less forcible, was necessary. It was not always possible to decide whether the adhesions were inside or outside a joint. The cracking often heard in forcible movement was alarming, but not, as he thought, dangerous.

Mr. Barwell thought there was often subluxation, especially of the shoulder and ankle, where a little manipulation put things right. He always liked to move the joint a few days after any injury near it. He also referred to a case of dislocation of the scaphoid where severe measures were contemplated, but which was easily reduced by manipulation. As regards joints, he did not think that synovial membranes often grew together, but the cartilages might.

Mr. George Brown asked a question about wasted muscles after rheumatic inflammation and anchylosis.

Mr. Morris thought it was not advisable to drive too far the distinctions between adhesions inside and outside joints, especially referring to the shoulder and knee. And movement under chloroform did not always give certain results. There was often stiffness after slight fracture of the olecranon without displacement. Should force be used in such cases?

Mr. Prescott Hewett said that in most cases where bone-setters succeeded the injuries were slight, as when there was some contraction in and around the joint, especially the knee. The acute symptoms lasted but for a time, though the stiffness remained; and then the patient applied to a bone-setter, who broke down the adhesions. In this respect the treatment suited fairly well the knee and ankle, but not so well the shoulder—still less the elbow. Contractions of the toes frequently arose from bad shoes; and these were readily amenable to treatment. But too much force should not be used in any case. He had seen the neck of the thigh-bone broken; he had also seen inflammation and pyæmia after interference with the shoulder-joint. In one case there was gangrene of the leg after fracture by a bone-setter, necessitating amputation at the thigh, and thus causing death.

The President said that the public ought to know that the profession can treat these cases, and narrated a case of hysteria where much mischief was done, the spine being all the time perfectly well.

Mr. Marsh having spoken a few words of acknowledgment, the Society adjourned.

MEDICAL NEWS.

King and Queen's College of Physicians in Ireland.—At the monthly business meeting of the College, held on Friday, April 2, the following candidates, nominated in January, were duly elected Fellows of the College:—

Ashe, Isaac, M.D., M.Ch. Univ. Dub., M.K.Q.C.P.I., L.M., Physician Superintendent, Central Lunatic Asylum, Dundrum.
Joynt, Christopher, L.K.Q.C.P.I., M.D. Queen's Univ. Ire., M.R.C.S. Eng., Surgeon-Major Bombay Army.

At the usual monthly examinations for the licences of the College, held on Monday, Tuesday, Wednesday, and Thursday, April 5, 6, 7, and 8, the following candidates were successful:

For the First Professional Examination—

Bosanquet, Adela. | Deane, John Edward James.

For the licence to practise Medicine—

Ayrton, Matilda Charlotte Chaplin. | Denham, John Knox.
Barry, Charles James. | Kidd, Anthony.
Bradley, Joseph. | Mosse, Charles George Drummond.
Daly, John Joseph. | O'Brien, Cornelius.
Davison, James. | Pollock, John.
Swanson, William James.

For the licence to practise Midwifery—

Ayrton, Matilda Charlotte Chaplin. | Moore, Edward Erskine.
Davison, James. | O'Brien, Cornelius.
Kidd, Anthony. | Sproulle, Oliver William.
Swanson, William James.

The following additional licentiates have been recommended for the Membership of the College, and will be admitted on taking the necessary declaration:—

John Frederick Knipe, 1856, Finglas.
Henry Beaumont, 1867, Surgeon R.N.
Patrick Magenis Rice, 1867, Galway.
John Joseph Crean, 1868, Surgeon A.M.D.
David James Freeman, 1871, Waterford.
Joseph Byrne, 1872, Londonderry.

The figures placed after the names indicate the year in which the licence of the College was obtained.

Royal College of Surgeons of England.—The following gentlemen passed their primary examination in Anatomy and Physiology at a meeting of the Board of Examiners on the 9th inst., and when eligible will be admitted to the pass examination, viz.:—

Angelo, Michael, student of the London Hospital.
Beatley, William C., of the Charing-cross Hospital.
Black, Robert, of the London Hospital.
Codd, Arthur F. G., of St. George's Hospital.
Collyns, Robert J., of St. Bartholomew's Hospital.
Dimsey, Edgar R., of the Middlesex Hospital.
Donald, James, of the Charing-cross Hospital.
Edgelow, Percy, of St. George's Hospital.
Fox, Robert F., of the London Hospital.
Jenkins, Edward J., of St. Bartholomew's Hospital.
Kiewicz, Henry F., of the London Hospital.
McMillan, John F., of the Middlesex Hospital.
Meyer, Charles H. L., of Guy's Hospital.
Nicholls, Frederick L., of the Charing-cross Hospital.
Pope, Percy, of St. George's Hospital.
Ranson, William E., of the Middlesex Hospital.
Rodwell, John S., of the Charing-cross Hospital.
Russell, Michael W., of the Middlesex Hospital.
Sharood, Oliver W., of the London Hospital.
Smith, W. A. Winwood, of St. George's Hospital.
Tibbles, William, of the Charing-cross Hospital.
Wynter, Walter E., of the Middlesex Hospital.

Two candidates were rejected. The following gentlemen passed on the 12th inst., viz.:—

Adkins, George, student of the London Hospital.
Booth, John H., of Guy's Hospital.
Brodie, Charles G., of the Middlesex Hospital.
Buksh, Raheem, of the London Hospital.
Coates, William, of the London Hospital.
Dale, Walter F., of the London Hospital.
Davies, John C., of the London Hospital.
Davis, John W., of the London Hospital.
Douty, J. Harrington, of the Middlesex Hospital.
Dyer, Sidney R., of the Middlesex Hospital.
Eales, George Y., of St. George's Hospital.
Elgood, Charles R., of University College Hospital.
Hern, William, of the Middlesex Hospital.
Holyoake, Ralph, of the London Hospital.
Jones, David L., of the Charing-cross Hospital.

Kenny, Frederick H., student of the London Hospital.
Lewis, James K., of the Charing-cross Hospital.
Sinclair, John, of the London Hospital.
Tate, Alan E., of the Middlesex Hospital.
Thomas, John H., of the London Hospital.
Wyborn, Samuel, of the Charing-cross Hospital.

Three candidates were rejected. The following gentlemen passed on the 13th inst., viz.:—

Anderson, Alfred J., student of St. Bartholomew's Hospital.
Beevor, Hugh R., of King's College Hospital.
Bollen, Frederick J., of University College Hospital.
Brooks, Walter T., of King's College Hospital.
Buckell, William R., of University College Hospital.
Cater, J. Rundle, of St. Mary's Hospital.
Culhane, Francis J. F., of University College Hospital.
Donnet, James J. C., of King's College Hospital.
Doyle, E. A. Gaynes, of the Westminster Hospital.
Ellis, Sidney, of King's College Hospital.
Goulston, Arthur, of St. Thomas's Hospital.
Hudson, Ernest, of University College Hospital.
Hull, Walter, of St. Thomas's Hospital.
Kealy, John W. G., of King's College Hospital.
Llewellyn, David W. H., of St. Thomas's Hospital.
Lynam, Robert G., of King's College Hospital.
Pollard, Joseph, of King's College Hospital.
Power, D'Arcy, B.A. Oxon., of St. Bartholomew's Hospital.
Pruen, Septimus T., of St. Bartholomew's Hospital.
Wilkinson, William C., of University College Hospital.

Four candidates were rejected. The following gentlemen passed on the 14th inst., viz.:—

Bateman, Hinton E., student of St. Bartholomew's Hospital.
Butler, Gilbert E., of the Westminster Hospital.
Green, Henry, of St. Mary's Hospital.
Hendley, Harold, of St. Bartholomew's Hospital.
Knight, Frederick, of University College Hospital.
Lane, Frederick H., of University College Hospital.
Morgan, L. Arthur, of St. Thomas's Hospital.
Porter, G. David, of King's College Hospital.
Renner, Charles, of University College Hospital.
Sanderson, Robert, of the Westminster Hospital.
Sheppard, William J., of St. Thomas's Hospital.
Skipper, Edward, of University College Hospital.
Stivens, Bertram H. L., of King's College Hospital.
Treasure, W. B. Crawford, of the Charing-cross Hospital.
Tunzelmann, Edward W. von, of University College Hospital.
Walker, Francis J., of St. Bartholomew's Hospital.
Willoughby, Alfred H., of St. Mary's Hospital.

Twenty-seven candidates out of the 173 examined having failed to acquit themselves to the satisfaction of the Board of Examiners, were referred to their anatomical and physiological studies for three months.

APOTHECARIES' HALL, LONDON.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, April 8:—

Kángá, Jamshedji Kharshedji, Bombay.
Pickering, Robert Whitworth, Park-road, Royton.
Usher, John Edward, Melbourne, Australia.

The following gentlemen also on the same day passed their Primary Professional Examination:—

Buckley, Thomas William, St. Thomas's Hospital.
Fenwick, William Cecil, Guy's Hospital.

BIRTHS.

COTTON.—On April 10, at Pendyffryn, Victoria-grove, Southsea, the wife of Dr. Cotton, Deputy Inspector-General R.N., of a daughter.

DYTE.—On April 14, at 24, Upper Bedford-place, Russell-square, the wife of D. H. Dyte, L.R.C.P., of a daughter.

ELLIS.—On March 9, at Sitapúr, Oudh, the wife of John Ellis, M.D., Bengal Medical Service, of a son.

LEESON.—On April 6, at Twickenham, the wife of J. Rudd Leeson, M.B., of a daughter.

MOSS.—On April 9, at Chardville, Elphinstone-road, Southsea, the wife of Edward L. Moss, M.D., Staff-Surgeon H.M.S. *Atalanta*, of a son.

REID.—On April 11, at Belgrave-villas, Stratford, E., the wife of Walter Reid, Staff-Surgeon H.M.S. *Wolverine*, of a son.

WILSON.—On April 4, at Hill-park, Newport-on-Tay, the wife of T. G. Wilson, F.R.C.S., Fleet Surgeon H.M.S. *Unicorn*, of a son.

MARRIAGES.

BERNARD—RATCLIFT.—On April 7, at Wilmington, Dartford, Kent, Alfred G. Farquhar Bernard, M.R.C.S., to Mary Louisa, eldest daughter of the late James Ratclift, Esq., of Burton-on-Trent.

BRUORTON-RUSSELL.—On April 6, at Dublin, William Bruorton, M.R.C.S. of Hornchurch, Essex, to Janet, second daughter of Edward Russell, Esq., 12, Lansdowne-road, Dublin.

CASSIDY—FAIRMAN.—On April 7, at Grove-road, N.W., Joseph Lamont Cassidy, M.D., of Guilford-street, Russell-square, to Florence Margarette Kate, younger daughter of Captain Alfred Nelson Fairman, R.N.

DREW—YEO.—On April 7, at Prince Town, South Devon, Clifford Luxmoore Drew, M.B., to Minnie, younger daughter of the late William Yeo, Esq., of Richmond House, North Devon.

ELLISON—WILLIAMS.—On April 13, at Forest-hill, Frederick W. Ellison, M.R.C.S., of Catford, to Inez, second daughter of Thomas Williams Esq., J.P., of Birkenhead.

IVENS—DECK.—On April 8, at Blyford, Arthur Somers Ivens, L.R.C.P., M.R.C.S., of Thorpe-le-Soken, Essex, to Clara, daughter of Edward Deck, Esq., of Blyford Hall, Suffolk.

MACKILLIGIN—TAPSON.—On April 8, at Paddington, Robert Marquis Mackilligin, Esq., to Annie, second daughter of Alfred J. Tapson, M.B., of Gloucester-gardens, Hyde-park.

SANKEY—CARR.—On April 8, at Shipton Oliffe, Gloucestershire, W. Arthur C. O. Sankey, Esq., third son of W. H. O. Sankey, M.D., of Sandywell Park, Gloucestershire, to Annie S. Fox, eldest daughter of Rev. John A. Carr, B.A., Rector of Shipton Oliffe-with-Shipton Sollars.

STE. CROIX—QUAIN.—On April 8, at St. Andrew's, Wells-street, George Alfred Ste. Croix, Esq., to Beatrice, second daughter of Richard Quain, M.D., F.R.S., of Harley-street.

UDALL—DRUMMOND.—On April 10, at Higher Broughton, Robert John Udall, Esq., to Olivia Emma, eldest daughter of John Drummond, Esq., L.R.C.P., M.R.C.S., of Manchester.

VIGNE-WAGETT.—On April 8, at Notting-hill, John Henry Vigne, Esq., to Beatrice Martha, fourth daughter of John Wagett, M.D., of Ladbroke-grove, Kensington-park-gardens.

WOODHOUSE—WALKER.—On April 8, at Kensington, Robert Hall Woodhouse, M.R.C.S., L.D.S., to Minnie Corbett, only child of the late Robert Walker, Esq., of Glasgow.

DEATHS.

JOHNSON, JAMES, M.D., at The Chantry, Norwich, on April 5.

POTTLE, EDGAR GEORGE, L.R.C.P., M.R.C.S., at 61, Bunhill-row, E.C., on April 9, aged 40.

SHARPEY, WILLIAM, M.D., LL.D., F.R.S., Emeritus Professor of Anatomy and Physiology in University College, at 50, Torrington-square, on April 11, aged 78.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BATH GENERAL HOSPITAL, Bath (Mineral Water Hospital).—Registrar. Applications, with testimonials, to be sent in before April 21.

BRECKNOCK UNION.—Medical Officer and Public Vaccinator. Applications, with testimonials and certificates of registration and qualifications, to be sent to Mr. David W. T. Thomas, Clerk, on or before April 22.

CHILDREN'S HOSPITAL, BIRMINGHAM.—Resident Medical Officer and Assistant Resident Medical Officer. Candidates must be registered in accordance with the Act 21 Vict., cap. 90; and their certificates of registration, with testimonials, to be sent to the Hon. Sec., L. Parker, Esq., on or before April 22.

LIVERPOOL DISPENSARIES.—Assistant House-Surgeon. Candidates must be duly qualified and unmarried. Applications, with testimonials and registration certificate, to be sent to the Secretary, Leith Offices, 34, Moorfields, Liverpool, on or before April 26.

NOTTING-HILL PROVIDENT DISPENSARY.—House-Surgeon. Applications, with testimonials, to be sent to the Hon. Secretary, W. P. Collins, Esq., 8, Pembridge-gardens, Notting-hill, W., on or before May 25. (*For further particulars see Advertisement.*)

PARISH OF ST. MATTHEW, BETHNAL-GREEN.—Assistant Medical Officer. Candidates must possess a double qualification in medicine and surgery. Salary £150 with board and residence.

ROYAL SOUTHERN HOSPITAL, LIVERPOOL.—Junior House-Surgeon. Candidates must be medically and surgically qualified. Applications, with testimonials and registration certificate, to be sent to the Chairman of the Medical Board on or before April 28. (*For further particulars see Advertisement.*)

WESTON-SUPER-MARE HOSPITAL.—House-Surgeon. Candidates must have a registered surgical and medical qualification. (*For further particulars see Advertisement.*)

WORCESTER COUNTY AND CITY LUNATIC ASYLUM.—Junior Assistant Medical Officer. Candidates must be duly qualified and registered, unmarried, and not above thirty-five years of age. Applications, with testimonials, to be sent to Dr. Sherlock, at the Asylum, on or before April 24.

WREXHAM INFIRMARY AND DISPENSARY.—House-Surgeon. Candidates at least possess one qualification. Applications, with testimonials, to be sent to the Secretary, J. Oswell Bury, Esq., Temple-row, Wrexham, on or before April 20.

UNION AND PAROCHIAL MEDICAL SERVICE.

RESIGNATIONS.

Toxteth Park Township.—Mr. C. R. Woods has resigned the office of Assistant Medical Officer at the Workhouse: salary £100 per annum.

APPOINTMENTS.

Bath Union.—Caleb Barrett, M.R.C.S., L.S.A., to the Sixth District. F. W. Hanham, L.R.C.P. Edin., L.F.P.& S. Glasg., to the Fourth District.

Huddersfield Union.—James McLintock, M.B., C.M., to the Marsden District.

OSSIFICATION OF THE CILIARY BODY.—In the *New York Medical Record* for March 6, Dr. Lundy, Professor of Clinical Diseases of the Eye at the Michigan College of Medicine, describes and figures an unique pathological condition of the eye:—"The ciliary body was found to be almost completely ossified, and its site occupied by a bony ring, which was not completely ossified at one point. In the centre of this osseous ring the lens was found embedded, and after its removal the remains of the iris were visible. The bone occupying the site of the ciliary body was very firm and dense, and varied in thickness from 4 mm. to 0·5 mm. One point which is especially deserving of notice

in a section of the bone in the ciliary body is the presence of a Haversian canal. The presence of Haversian canals in small irregular pieces of bone which are of pathological origin is quite rare. Although the absence of Haversian canals does not disprove the presence of true bone, yet the presence of these canals is a very positive proof of true ossification." Besides this, the more common occurrence of a thin plate of bone due to the ossification of the choroid was also observed.

TREATMENT OF MUGUET.—Dr. Vivier observes that by far the best application in this disease—that of Bazin—has almost fallen into oblivion, which he attributes to the fact that Bazin never published a formula. After numerous trials Dr. Vivier recommends the following, which constitutes a mode of treatment incomparably superior to any other:—Distilled water 25 grammes, alcohol 5 grammes, and corrosive sublimate 60 centigrammes. The patches of muguet are to be swept over by means of a pencil moistened in this, once, twice, or three times a day, according to the rapidity of the reproduction of the cryptogam. In spite of the poisonous character of the agent, its application is made without danger and always with rapid success, unless the patches are inaccessible by being placed in the pharynx or at the back of the velum. The application has only one inconvenience—that it must be made by the practitioner himself; but the rapidity of the cure amply compensates for this.—*Progrès Méd.*, March 27.

COMPOSITION AND QUALITY OF THE METROPOLITAN WATERS IN MARCH.—The following are the returns (by Dr. Meymott Tidy) of the Society of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, etc.	Nitrogen: As Nitrates, etc.	Ammonia.		Hardness. (Clarke's Scale)	
				Saline.	Organic.	Before Boiling.	After Boiling.
Thames Water Companies.	Grs.	Grs.	Grs.	Grs.	Grs.	Degs.	Degs.
Grand Junction ...	22·04	0·056	0·165	0·001	0·070	16·0	3·8
West Middlesex...	21·87	0·056	0·150	0·000	0·008	15·8	3·8
Southwark and Vauxhall ...	21·24	0·032	0·150	0·000	0·006	16·5	3·3
Chelsea	22·15	0·032	0·150	0·002	0·005	15·8	3·8
Lambeth	23·17	0·028	0·150	0·000	0·007	16·0	3·8
Other Companies.							
Kent	33·19	0·004	0·435	0·000	0·003	21·2	5·6
New River ...	22·03	0·040	0·150	0·000	0·006	16·0	3·3
East London ...	23·93	0·028	0·150	0·001	0·006	17·0	3·8

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours. The water was found to be clear and nearly colourless in all cases but the following, when it was slightly turbid—namely, Lambeth Water Company.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Dr. F. I. de Lisle, Napier, New Zealand.—Letters and enclosure received.

J. B., Manchester.—You should look to our advertising columns for the desired information. Seeing that the written portion of the pass examination will take place this day, your application will be too late.

Once a Member, Devizes.—Yes, your case is a hard one, and will no doubt have a favourable construction when the new by-laws come into operation. Write to the gentleman mentioned in your communication, from whom you will receive a confidential reply.

A Poor Widow's Picture and the Doctor.—A poor Hungarian widow, living in a garret at Limehouse with her deaf and dumb son, was overtaken by hard times and fell ill. Some kind people went to her aid. They found the room wretchedly furnished, but covered all over with coloured prints and engravings. Looking over these, a hundred pound note was discovered pasted between a cut from the *Illustrated London News* and a business card. The discoverers doubted their eyes, and the doctor, who had been sent for, coming in at the time, was made aware of the circumstance. An attempt to detach the engraving from the wainscot failed; and, by direction of the medical man, the piece of panel was cut out, taken to the Bank of England, and cashed, when the doctor explained that the proceeds would be lodged to the credit of the old lady. It seems that she had picked up the note two years ago, and seeing in it only a picture, fixed it on the wall of her room, where it remained an unsuspected treasure.

An Old Blue.—The official statement of accounts of Christ's Hospital for the year ending December 31 last shows that the salaries paid to the medical officers for London and Hertford amounted to £620.

Mr. H. Norris.—All the information we can give you on the subject is that the extract was made from the *Gentleman's Magazine* of August, 1733, and the late Mr. W. Wadd, Surgeon Extraordinary to the King, alludes to it in his "Mems., Maxims, and Memoirs," page 21.

A Metropolitan Teacher.—At the primary examination for the Membership of the College of Surgeons in the early part of last April there were 213 candidates, against 173 in the examination just concluded. No less than fifty-two were rejected on the former occasion, including seven who had an additional three months.

Lady Nurses.—Mr. W. J. Nixon, the House-Governor of the London Hospital, referring to the article in the current number of the *Nineteenth Century*, on "Hospital Nursing," says the article in question "is mainly directed against the London Hospital," that institution being singled out as "the largest of the kind," and one "where the old system is still in full force"; and he adds, "Nothing can be further from the truth than these statements are in all essential particulars. It will gratify the House-Committee if anyone who takes an interest in the question will visit the London Hospital and form an opinion for himself."

A Retreat for Habitual Drunkards.—At the Gloucester County Sessions, last week, a licence was granted for a retreat for habitual drunkards near Stroud.

Fatherland.—The next German census will be taken on December 1 this year, and it is computed that the population of the empire, which stood at 42,727,360 when the census was taken four years ago, will be found to be about 45,500,000.

A Righteous Determination.—Mr. Sheil, the Wandsworth police magistrate, in recently sentencing a milk-dealer for selling milk adulterated with 16 per cent. of added water, said "he was determined, if possible, to stop that kind of adulteration, as children were often half-starved by drinking what was supposed to be genuine milk." Mr. Sheil fined the defendant £5, but subsequently finding that he was in a small way of business, and had satisfied the inspector who had taken his milk on a former occasion, reduced the amount to 40s., warning him that if he were again charged the full penalty of £20 would be imposed.

Dr. Barnardo's Convalescent Home, Jersey.—The opening of this Convalescent Home by Dr. Barnardo, for the reception of a large number of children sent thither from London, was reported by a Committee of the Jersey States Assembly to the House last week. The Committee were desirous the Assembly should adopt measures to prevent the maintenance of these children falling upon the inhabitants in the event of Dr. Barnardo's death or failure of income. The report is to receive the early consideration of the Assembly.

The Temperance Movement in Wales.—It was stated at the Glamorganshire Sessions, last week, on the presentation of a memorial for the closing of public-houses on Sundays, that after a careful canvass the fact was discovered that 93 per cent. of the population of Wales were in favour of the movement, and that a large majority of the publicans of the Principality were also favourable to the Bill for closing their houses on Sundays.

Benevolence.—The late Mr. Thomas Wrigley, of Timberhurst, Lancashire, has by his will bequeathed the sum of £10,000 to each of the following institutions:—Owens College, Manchester; the Manchester General Hospital for Sick Children; the Royal Albert Asylum, Lancaster; and the Bury Dispensary.

W. Septimus M.—The Local Government Board have officially stated that masters of workhouses are empowered to give clothing to inmates about to leave those institutions, if the consent of the guardians have first been obtained.

The London Hospital: a Worthy Example.—The House-Committee acknowledge the receipt to the People's Fund of an annual subscription of £21 from the *employés* of the London department of the brewery of Messrs. Ind, Coope, and Co.

A Sanitary Committeeman.—Since the passing of the Rivers' Pollution Act, 1876, no loan for sewerage works is sanctioned by the Local Government Board unless provision is made for the purification of the sewage.

COMMUNICATIONS have been received from—

Dr. W. ROBERTS, Manchester; Dr. CAYLEY, London; Dr. DIODATO BORELLI, Naples; Messrs. MAX GREGER AND CO., London; Mr. J. H. CRAIGIE, London; Mr. SHIRLEY F. MURPHY, London; THE REGISTRAR OF APOTHECARIES' HALL, London; THE SECRETARY OF THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY; Mr. J. CHATTO, London; Mr. T. M. STONE, London; THE SECRETARY OF THE PATHOLOGICAL SOCIETY, London; Mr. CHARLES WAHAB, London; Mr. J. P. INGPEN, London; Mr. CLEMENT LUCAS, London; Dr. J. W. MOORE, Dublin; THE SECRETARY OF THE ROYAL INSTITUTION, London; Professor PARTRIDGE, Anerley; Mr. W. HILL, London; Mr. F. T. W. BACOT, Seaton, Devon; Dr. F. TAYLOR, London; THE SECRETARY OF THE CLINICAL SOCIETY, London; Dr. BARLOW, London.

BOOKS, ETC., RECEIVED—

An Introduction to the Study of Chemistry, by A. P. Luff, F.I.C., F.C.S., F.L.S.—Cenni Statistici sul pio Istituto di S. Spirito in Sassia dal 1870 al 1876—National Life Assurance Society's Report—Monthly Return of Births, Deaths, and Marriages registered in the Eight Principal Towns of Scotland for March, 1880—Elijer Goff's Manifesto. third edition - On the Treatment of Empyema, by William Thomas, M.B. Lond., F.R.C.S. Eng.—Movable Atlas on the Ear and Teeth, by G. J. Witkowski, M.D.—Rest and Pain, by the late John Hilton, F.R.S., F.R.C.S.—General

Hospital, Birmingham, One Hundredth Annual Report, 1879—Transactions of the College of Physicians, vol. iv.—The Population Question, by Charles R. Drysdale, M.D.—Interpretations of the Structure and Function of the Kidney, by Andrew W. Smyth, M.D, of New Orleans, La.—The Weather of 1879, by Edward Mawley, F.M.S.—Eighth Annual Report of the Local Government Board, 1878-79.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Centralblatt für die Medicinischen Wissenschaften—Nature—Revue Médicale—Occasional Notes—Gazette Hebdomadaire—Louisville Medical News—Therapeutic Gazette—Practitioner—El Siglo Medico—Gaceta Medica—Centralblatt für Gynäkologie—Westminster Review—Students' Journal and Hospital Gazette—Philadelphia Medical Times—Dublin Journal of Medical Science—El Observador Medico—Boston Journal of Chemistry—Archives of Medicine—Boston Medical and Surgical Journal—Canada Lancet—Canadian Journal of Medical Science—Journal of Psychological Medicine and Mental Pathology.

APPOINTMENTS FOR THE WEEK.

April 17. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

Royal Institution, 3 p.m. Mr. James Sully, "Art and Vision."

19. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. Mr. William Adams will exhibit casts of Contracted Fingers. Sir Joseph Fayrer will read a paper "On Hepatic Abscess."

20. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Royal Institution, 3 p.m. Mr. R. H. Scott, "Wind and Weather."

Statistical Society, 7¾ p.m. Dr. F. J. Mouat, "On the Education and Training of the Children of the Poor."

Pathological Society, 8½ p.m. The President—Multiple Ivory-Patch Morphœa in process of Rapid Recovery (living specimen). Mr. Morrant Baker—Skin Disease, probably Lichen Ruber (living specimen). Dr. William Ewart—Ramifying Cyst in the Brain. Mr. Eve—1. Aneurism by Anastomosis of the Ear; 2. Laryngeal Perichondritis in Typhoid Fever and in Small-pox. Mr. Sydney Jones—Elongation of Limb in Connexion with Knee-Joint Disease (living specimen). Dr. Pearson Irvine—Aortic, Mitral, and Tricuspid Constriction. Mr. Walsham—Tumour of Spermatic Cord. Mr. W. Harrison Cripps—1. Imperforate Anus; 2. Volvolus in an Infant; 3. Complete Neurosis of the Lower Jaw, with Cancrum Oris. Mr. R. W. Parker—1. Diffuse Sarcoma of Liver in an Infant three weeks old; 2. Ossifying Chondro-Sarcoma of Left Femur, with Secondary Growths; 3. Congenital Talipes Varus; 4. Talipes Calcareus.

21. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Lister), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.; National Orthopædic, Great Portland-street, 10 a.m.

Hunterian Society (London Institution), 8 p.m. Mr. Startin will show a Case of Acute Pemphigus. Mr. J. E. Adams, "On a Case of Cancer of the Rectum treated by Excision and Colotomy," and "On a Case of Osteotomy of the Femur for Genu Valgum."

Association of Surgeons Practising Dental Surgery (Council Meeting, 7.30 p.m.), 8½ p.m. Mr. Christopher Heath, "Thirty-five Years' History of a Maxillary Tumour."

22. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

Royal Institution, 3 p.m. Prof. Tyndall, "Light as a Mode of Motion: Theories of Light and Colours."

23. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

Quekett Microscopical Club (University College), 8 p.m. Mr. J. G. Waller, "On an Undescribed British Sponge of the Genus Raphiodesma." Mr. A. Martinelli, "On the Mechanism of the Stomata of the Holly."

Royal Institution, 8 p.m. Mr. W. H. Pollock, "Dumas Père."

Clinical Society, 8½ p.m. Dr. Stokes (of Dublin), "On Amputations through the Hip-joint." Dr. Southey, "On a Case of Acute Rheumatism, with Multiple Embolisms." Mr. Cripps, "On a Case of Secondary Hæmorrhage from the Stump of the Thigh, with Calcareous Degeneration of the Vessels." Dr. Graily Hewitt, "On a Case of Acute Hysterical Vomiting of ten months' duration caused by Displacement of the Uterus."

VITAL STATISTICS OF LONDON.

Week ending Saturday, April 10, 1880.

BIRTHS.

Births of Boys, 1533; Girls, 1423; Total, 2956.
Corrected average in the 10 years 1870-79, 2599·7.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	802	730	1532
Average of the ten years 1870-79, corrected to increased population	921·3	856·2	1777·5
Deaths of people aged 80 and upwards ...	...	...	49

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa
West	561359	...	8	11	2	12	...	2	1	4
North ...	751729	8	3	5	2	24	...	2	1	3
Central ...	334369	1	1	4	3	9	...	2	1	...
East	639111	3	3	10	1	12	...	2	...	1
South	967692	1	11	19	3	28	1	2	1	2
Total	3254260	13	26	49	11	85	1	10	4	10

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·542 in.
Mean temperature	44·8°
Highest point of thermometer	58·2°
Lowest point of thermometer	35·1°
Mean dew-point temperature	39·4°
General direction of wind	S.W. & N.N.E.
Whole amount of rain in the week	0·41 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, April 10, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1880.*	Persons to an Acre. (1880.)	Births Registered during the week ending April 10.	Deaths Registered during the week ending April 10.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3664149	48·6	2956	1532	59·2	35·1	44·8	7·12	0·41	1·04
Brighton	107321	45·6	82	38	56·0	37·5	45·0	7·22	0·24	0·61
Portsmouth ...	134224	29·9	92	45	...	...	...	...	...	...
Norwich	85827	11·5	77	47	57·0	37·0	45·4	7·44	0·48	1·22
Plymouth	74993	53·8	60	45	57·0	39·4	47·4	8·55	1·15	2·92
Bristol	213536	48·0	176	88	53·5	36·5	44·1	6·73	0·90	2·29
Wolverhampton ...	75970	22·4	70	35	57·2	33·0	43·0	6·11	0·18	0·46
Birmingham ...	394738	47·0	345	172	...	...	...	...	...	...
Leicester	129912	40·6	106	42	59·2	34·0	44·9	7·17	0·47	1·19
Nottingham ...	173627	17·4	161	76	61·3	32·7	45·9	7·72	0·71	1·80
Liverpool	544056	104·4	418	271	52·8	37·0	44·1	6·73	0·03	0·08
Manchester ...	363130	84·6	287	199	...	...	...	...	...	...
Salford	185786	35·9	150	84	...	...	...	...	...	...
Oldham	115413	24·7	88	58	...	...	...	...	...	...
Bradford	197196	27·3	128	76	57·7	36·8	45·0	7·22	0·37	0·94
Leeds	318929	14·8	250	105	60·0	38·0	45·0	7·22	0·88	2·24
Sheffield	304938	15·5	253	137	57·0	36·5	45·0	7·22	0·01	0·03
Hull	149627	41·2	130	62	57·0	34·0	43·6	6·45	0·26	0·66
Sunderland ...	116730	42·2	80	56	63·0	39·0	46·6	8·12	0·54	1·37
Newcastle-on-Tyne	149366	27·8	112	71	...	...	...	...	...	...
Edinburgh	229839	54·8	139	95	54·1	35·2	44·7	7·06	0·56	1·42
Glasgow	589598	97·7	357	273	...	...	...	...	...	...
Dublin	314666	31·3	187	185	54·8	38·0	44·8	7·12	0·30	0·76
Total of 23 Towns in United Kingdom	8633571	39·2	6704	3792	63·0	32·7	45·0	7·22	0·47	1·19

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·54 in. The lowest reading was 29·10 in. at mid-day on Sunday, and the highest 30·08 in. on Friday evening.

* The figures for the English and Scottish towns (except for Nottingham, Salford, and Oldham) are the numbers enumerated in April, 1871, raised to the middle of 1880 by the addition of nine years and a quarter's increase, calculated at the rate which prevailed between 1861 and 1871. Revised estimates have been adopted for Nottingham, Salford, and Oldham, based upon special returns of inhabited houses existing within those boroughs. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

CROONIAN LECTURES.

ON SOME POINTS IN THE PATHOLOGY AND TREATMENT OF TYPHOID FEVER.

Delivered at the Royal College of Physicians of London.

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Lecture III.

In estimating the value of any particular mode of treatment we base our judgment on two classes of facts. First, by the observation of individual cases we see whether it appears to relieve the symptoms and exercise a favourable influence on the course of the disease. Secondly, we apply the test of statistics, and by collecting a great number of instances we ascertain the effect on the general rate of mortality. Now, both these methods are open to many fallacies. In the first place, if the observer be not familiar with the natural course of the disease, and the various deviations which are liable to occur, he is apt to ascribe to his remedies what is really the unaided effect of nature; secondly, he may confound temporary amelioration with permanent benefit, and may thus incur the danger of relieving urgent symptoms at the expense of diminishing the chances of ultimate recovery.

Both these mistakes have frequently been committed in the treatment of typhoid fever. Thus the early recovery of the abortive forms has repeatedly been ascribed to the effects of remedies, as calomel or emetics. Again, the great relief which bleeding often gives to the urgent symptoms of this as of other acute febrile diseases has in former times caused it to be extensively practised, with the effect of greatly increasing the mortality.

The second method is still more open to fallacy, so that it is often said in opprobrium that anything may be proved by statistics. But, nevertheless, they form the final test by which all modes of treatment must at last be decided. The fallacies of statistics depend on two main errors—first, an insufficient collection of facts; secondly, the comparing together of unlike instances. We must therefore, in applying this test, take care to compare together only like instances, and if possible accumulate such an overwhelming number as ultimately to reduce all sources of error to the vanishing point.

Before, then, we are in a position to estimate the value of any particular mode of treating typhoid fever we must be acquainted not only with the natural course of the disease, but also with the usual rate of mortality, which of late years has, I think, been but little affected by treatment apart from nursing and feeding—the treatment generally practised being what may be termed the expectant, or, as some would prefer to term it, the rational method. This consists in not treating the disease at all. We begin by confessing that we are quite unable to arrest its progress or materially to modify its course, and all we aim at is to put the patient in the most favourable condition to support its effects. We see that he is carefully nursed and properly fed, all injurious influences are as far as possible removed, and urgent symptoms are combated as they may arise. Thus if there be severe diarrhœa we probably give him astringents; if hæmorrhage, styptics; if he cannot sleep, we administer narcotics; if there be delirium, calmatives; and when his strength begins to fail, stimulants; if there is congestion of the lungs, we perhaps venture on a mustard poultice or a turpentine stupe; or if there is severe headache, an ice-cap. But we leave the fever itself to run its course unchecked.

We have now to consider what are the results obtained by this mode of treatment. The most trustworthy statistics are those afforded by hospitals, but in them the rate of mortality is no doubt higher than in private practice. This is partly owing to the previous condition of the patients, partly to the fact that the more severe cases seek admission into hospitals, and partly because they commonly do not come under treatment till late in the disease, and nothing so much increases the mortality of typhoid fever as delay in the commencement of treatment.

If we take the results afforded by the London Fever Hospital we may divide them into two periods—1. A period of twenty-one years, during which the Hospital received all the pauper patients of the metropolis; 2. A period of nine years, during which the pauper cases have been excluded, and the patients have consisted of artisans, domestic servants, policemen, *employés* in shops and houses of business, together with persons in a higher position who have occupied private rooms. During the first period 8000 cases were admitted and 1519 died, giving a mortality of 18·9 per cent. During the second period 590 cases have been admitted and 80 died, giving a mortality of 15·9 per cent. These figures include a considerable number of cases which were admitted moribund and died within twenty-four or forty-eight hours.

The Pauper Hospital at Homerton: cases 1509, deaths 255; rate of mortality 16·8 per cent.

The Stockwell Pauper Hospital: cases 1223, deaths 301; rate 22·6 per cent.

The principal general hospitals of London, taking the last ten or twelve years, give the following results:—

St. George's: cases 387, deaths 76; rate of mortality 19·6.
Guy's: cases 295, deaths 57; rate 19·3.
University College: cases 163, deaths 29; rate 17·7.
St. Bartholomew's: cases 635, deaths 104; rate 16·3.
St. Thomas's: cases 445, deaths 70; rate 15·7.
Middlesex: cases 461, deaths 72; rate 15·6.
King's College: cases 318, deaths 39; rate 12·2.

Total for the hospitals of London: cases 14,125, deaths 2522; rate 17·8 per cent. These figures no doubt include a considerable number of cases treated specifically.

If we take foreign statistics we find that, in France, Jaccoud, with a collection of 60,000 cases, gives a mortality of about 20 per cent.

The General Hospital of Vienna, with 17,000 cases, has a mortality of 22·5 per cent.

The Hospital at Basle, with 1718 cases, a mortality of 27·3; and generally in the principal continental hospitals a rate of mortality varying from 16 to 25 per cent.

The English Army gives the following results for a period of six years ending 1877:—On home service, cases 545, deaths 131; rate of mortality 24 per cent. On foreign service, cases 1383, deaths 564; rate 40·7 per cent. The foreign returns are not, however, complete.

In the Royal Navy during a period of six years ending 1878, cases 414, deaths 110; rate 26·5 per cent.

Such, then, are the results of the expectant treatment of typhoid fever, with which, I think, we have little reason to be satisfied.

It does not fall within the scope of these lectures to give a description of the various methods which have been from time to time introduced for the specific treatment of typhoid fever; they have most of them again, sooner or later, fallen into disuse, till at last a complete scepticism on the effects of treatment in this disease has been proclaimed by many of the highest authorities. Thus Skoda says it makes no difference whether we do or do not administer remedies; and the same opinion has been expressed by many others.

Of late years, however, a plan of treatment has been revived, which aims at controlling the fever and preventing its injurious effects on the organism by keeping the temperature throughout the whole course of the disease under a moderate febrile heat.

Typhoid fever can hardly be looked upon as a malignant disease: upwards of 80 per cent. of the cases, if properly nursed and fed, will recover; and those who die are rarely struck down at once, overwhelmed by the virulence of the poison, but usually succumb after a protracted struggle. Hence it seems only reasonable to suppose that if we can succeed in striking out one of the factors adverse to the patient, even if it be not the most important, this will generally suffice. So evenly is the balance poised in most cases between life and death, that the removal of the smallest weight from the opposite scale will give the preponderance to the side of recovery.

Now, the factor in typhoid fever which is most under our control is the febrile heat: it lies in our power to prevent the temperature throughout the whole course of the disease from rising above a very moderate height; and hence we may obviate those injurious effects which are directly or

indirectly caused by the febrile state as such. The great acceleration of the pulse and breathing, the febrile oppression and malaise, the dry brown tongue, the thirst, the headache, the delirium, the stupor—may all be controlled. Nay, not only can we prevent the accession of these symptoms, but sometimes we can remove them after they have supervened. And, as a result, the granular degeneration and softening of the various organs and tissues, and the febrile consumption itself, may be in part checked.

Therefore, from Hippocrates downwards, to reduce the temperature has at all times been regarded as one of the most important indications of the treatment of fever. It would seem, then, that all we have to consider is how far we are able to effect this, and whether the means which we employ are in themselves devoid of danger; and I think a sufficient amount of evidence has been now accumulated to answer both these questions.

With regard to the first, it can be experimentally shown that by the repeated application of cold to the surface of the body—chiefly by means of cold water on the one hand, and on the other by the administration of certain drugs which have the property of reducing temperature, the most important being quinine, salicylate of soda, and digitalis—the febrile heat can almost always be controlled.

Such being the case, the second and more important question arises, Is it always, or even generally, a safe and expedient proceeding? We must accordingly apply to it the two tests I have mentioned above—first, whether it seems to relieve the symptoms and exercise a favourable influence on the course of the disease; and secondly, whether it diminishes the general rate of mortality.

The history of the introduction of what is now called the antipyretic treatment of fever is a very interesting and instructive one. The first person who treated febrile diseases by systematically reducing the temperature by cold affusions was the celebrated Dr. James Currie, and he seems to have been induced to try this method by the account published by Dr. Wright of an outbreak of typhus on board ship. Dr. Wright himself caught the disease, and, finding that the cold air of the deck relieved the febrile oppression, caused himself to be treated by cold affusions, and with such good results that he applied the same method to a passenger at his own request.

Dr. Currie, as is well known, systematically treated by cold affusions, and sometimes cold baths, a great variety of febrile diseases, especially typhus, typhoid, and scarlatina, making careful thermometric observations, and he laid down rules by which we may still guide ourselves. It is interesting to see how soon he discovered that although, when applied late in the disease, this method would occasionally rescue the patient from a condition apparently desperate; nevertheless, to insure success it was absolutely necessary to have recourse to it at the very onset, before the fever had, as it were, got the upper hand.

Although he does not expressly remark the lability of the temperature in fever, he was, nevertheless, quite aware how easily it may be raised or depressed by external agencies; and he describes a striking instance of a case of typhus where he caused a patient, who in his delirium had thrown off all his bedclothes, to be stripped of his shirt, and exposed, in a state of nudity, to a current of cold air from an open window. The effect was to reduce his temperature from 104° to 101°, to calm the delirium, and to throw him into a quiet sleep.

Dr. Currie soon had numerous followers, both in this country and on the Continent. Thus, Dr. Gregory applied it with great success in small-pox; Desgenettes, in Egypt, during an epidemic of plague, having witnessed the unexpected recovery of a patient who, in his delirium, threw himself into the Nile, was led to apply the cold bathing treatment with great success in this disease.

Giannini in 1805 became an ardent advocate of Curric's method. In 1813, after the retreat from Russia, a fearful epidemic of fever broke out among the troops and spread among the civil populations. At Berlin it raged almost with the virulence of the plague, and, in the hope of doing something to check its ravages, Dr. Horn, the director of the Charité Hospital, determined to follow the plan of treatment recommended by Currie. The results were most satisfactory, and fully confirmed Dr. Currie's experience. Since this time the treatment, though very imperfectly applied, has never quite died out in the Charité at Berlin.

In 1821 the celebrated Priessnitz, of Graefenberg, founded what is commonly known as the cold-water cure. He was a man who had all the qualifications necessary for a successful empiric. He was entirely ignorant of science and medicine, of great common sense, self-confident, and a firm believer in his own system. In consequence he soon became the fashion, and all the celebrities of Germany crowded to Graefenberg to be cured of all manner of diseases. Now, there can be no doubt but that Priessnitz met with the most remarkable success in the treatment of acute febrile diseases, especially pneumonia. His plan was to immerse the patients in a shallow bath, and keep them in it sometimes for several hours—the effect being, of course, to subdue the febrile heat, and so relieve the most urgent symptoms. When we remember that the orthodox mode of treating pneumonia at this time was free bleeding, tartar emetic, and calomel, we must confess that the empiric was far in advance of his time.

Chomel practised the treatment in typhoid fever, Graves and Trousseau in scarlatina.

In 1850, Dr. Armitage, a member of this College, after visiting Graefenberg, with the consent of Professor Schoenlein, and in conjunction with Dr. Traube, treated a large number of cases of acute disease, especially typhoid fever, in the Charité Hospital at Berlin, again with the most remarkable success. And on his return to England he published the results in a small work called "Hydropathy in Acute Disease." It is impossible to read this book without at once seeing the great advantages of this method. Nevertheless, it failed to obtain the recognition of the profession, and the treatment of Currie may be said to have died out in the land of its birth. The reasons for this are not far to seek. In the first place, it conflicted with popular and professional prejudices; and in the second, it is somewhat difficult to carry out.

Now, when facts conflict with prevailing theories they are pretty sure to be ignored; and the prejudice that patients with fever are injuriously affected by cold is perhaps more deeply ingrained in human nature than almost any other. This theory or prejudice is by no means confined to the vulgar; it is largely shared—often, no doubt, unconsciously—by the profession. I expect most practitioners would be horrified at the idea of exposing a patient, prostrate and delirious from typhus, to a cold draught from an open window, in a state of nudity; and yet by this means Dr. Currie at once relieved the threatening symptoms, and the patient made a good recovery. Usually when we are called to a case of fever we find the patient warm in bed, covered by several blankets, a good fire in the room, all draughts carefully excluded, and everybody anxious lest he should catch cold. I have seen a case of typhoid where the temperature was 105°, and there were five blankets on the bed. Now, in health it makes little or no difference to the internal temperature of the body whether there are five blankets or none, but in the labile temperature of typhoid fever it not unfrequently means a difference of 2°.

The revival of the antipyretic treatment must be ascribed to Dr. Brand of Stettin, whose method, variously modified, has now been adopted by most of the leading physicians in Germany, Austria, and Switzerland; and the number of cases thus treated is now so large that the results may be fairly estimated. Dr. Brand, in the last edition of his work, has collected upwards of 8000.

From Germany the treatment was introduced into France in a remarkable manner. Among the French prisoners in the late war who were confined at Stettin was Dr. Glénard, a clinical assistant at Lyons. An epidemic of typhoid broke out among the prisoners (23,000 in number), and ninety-three French soldiers were attacked. They were all treated by Dr. Brand according to his method, Dr. Glénard (certainly no partial witness) assisting, and they all recovered. Considering the very high rate of mortality of typhoid fever in times of war amongst troops depressed by hardships and dispirited by defeat and imprisonment, such a result naturally filled Dr. Glénard with enthusiasm, and on his return to Lyons he introduced this mode of treatment into the Lyons Hospital, again with the effect of greatly reducing the rate of mortality; and it has since been extensively tried by many of the leading French physicians.

In England, since Dr. Wilson Fox published instances of hyperpyrexia treated by the cold bath, its utility in this affection has been generally acknowledged; but the systematic treatment of fever from its commencement in this manner seems at present only to have been tried tentatively

in this country. Where it has been so tried the results have been most satisfactory. I may refer to the series of cases reported by Dr. Ord in the *St. Thomas's Hospital Reports*. Though the treatment, according to Dr. Brand's view, was only partially carried out, the mortality was decidedly diminished.

Dr. Edes, of Boston, introduced the treatment into America, and he also speaks most highly of it.

Such, then, is a short and imperfect sketch of the history of this method of treatment. I now propose briefly to describe the manner of applying it, and the results obtained by it.

The principle underlying the treatment is to keep the temperature throughout the whole course of the disease, from its very commencement to its termination, under a moderate fever heat, and the means employed to effect this are, in the main, abstraction of heat by the application of cold water, supplemented by the use of the drugs I have mentioned, though Dr. Brand is of opinion that the more we confine ourselves to the former and the less we use the latter, the more favourable are the results obtained.

The modes of applying cold water are the cold bath, cold affusion, cold packing, cold compresses, and the graduated bath, which consists in placing the patient in a warm bath and gradually cooling it down. Each of these methods is adapted to special cases, but for general use the cold bath is by far the best and the least troublesome to apply, and the rule for its use is this: whenever the patient's temperature exceeds 102·2° he should be put into a bath. It must be remembered that Dr. Brand always takes the temperature in the rectum. If we measure in the axilla, a somewhat lower height must be taken. He insists very strongly on the great advantages of rectum over axillary measurements, and there can be no doubt but that he is right; but I am so convinced of the impossibility of taking rectum temperatures six or eight times a day in this country, even in hospital practice, that, except under special circumstances, I never attempt to do so. Next with regard to the temperature of the bath. This must be regulated according to the patient's condition and the effect we wish to produce. As a rule it should not exceed 70° Fahr., and may often be advantageously much lower; 65° to 70° may be taken as the average limits. The duration of the bath must also be regulated by the patient's condition and the effect it produces. We ought to cause a reduction of at least two or three degrees, and if this is not obtained the next bath must be colder or longer. It must be remembered that the temperature usually continues to fall for some time after removal from the bath; it is therefore not necessary to take the temperature in the bath itself, but it should be done about half an hour after. The bath should be prolonged for some little time after distinct shivering has begun, watching, of course, the effect on the circulation. Usually the bath will be well borne for from ten to twenty minutes. The patient should then be put to bed, wiped dry and covered with a blanket. In many cases it is advisable to give some brandy or other stimulant before or during the bath.

In severe cases the cooling effect of the bath often only lasts about three hours; therefore the temperature should be taken every three hours by day and night, and whenever the temperature rises to 102° the bath should be repeated. The number of baths required will vary with the severity of the case. The rapidity with which the temperature rises after the bath is one of the best indications which we possess of the impression which the fever has produced on the nervous system. It would be a great mistake to suppose that the only or even the principal effect of the bath is to abstract a certain amount of heat from the body. It exercises a most powerful influence on the central nervous system, especially on the vaso-motor centres, and stimulates them to a resumption of their heat-regulating functions. This is shown by a well-known experiment. Heidenhain found that stimulation of the sciatic nerve of a dog under curare caused a fall of nearly 2° Fahr. in the temperature of the internal organs, but that this fall did not take place if the animal was fevered; if, however, when in this state it was first cooled by being placed in a cold bath, the usual fall took place.

When, as is not very infrequent, we meet with cases of typhoid in which there is stupor and great nervous depression, subsultus tendinum, and meteorismus, with only a moderate elevation of the temperature, the stimulating effect of the bath on the nerve-centres is of more importance than its refrigerating effect, and in such cases a cold bath of short duration, or cold affusion, is indicated. In other cases a more prolonged bath of higher temperature is required for the more complete abstraction of heat. As soon as the immediate effect has passed off, the patient should be lightly covered with a sheet and thin counterpane, and perhaps a blanket over the feet, but all general woollen coverings should be strictly forbidden. During the past cold winter I never allowed even a single blanket to a patient with typhoid in the Fever Hospital as long as the temperature was raised. In other respects the ordinary regimen should be observed. Abundance of cold drinks should be given; if there is headache, an ice-cap may be applied; if meteorismus or abdominal pain, a cold compress to the belly. Dr. Brand strongly recommends the use of cold compresses between the baths in all cases.

The other methods of abstracting heat are inferior in their effects, and are indicated in those cases where, from any reason, the cold baths are inadmissible. The graduated baths are useful in persons advanced in life, in cases of extreme prostration, where there is organic disease of the heart or lungs, where there is a tendency to syncope, or where—which is not often the case—the patient has an invincible repugnance to the cold baths. As an exclusive mode of treatment they would be found impracticable, especially in private houses. Six or eight hot baths daily would be found to overtax the resources of most middle and lower class establishments; whereas the cold bath may be kept ready in the room, and the water need only be changed once or twice daily, a little warm water being added each time before it is used, or in hot weather some ice. Cold sponging and cold affusion are especially adapted to the milder cases, and the former together with iced compresses when, from hæmorrhage or peritonitis, we are afraid to move the patients. Cold packing is very inferior to bathing as a means of reducing temperature, and very troublesome to apply, but is sometimes more readily submitted to.

Liebermeister, Jürgensen, and most of the physicians who practise the antipyretic treatment, supplement the cold baths by the administration of those drugs which have the effect of lowering the temperature, especially quinine, salicylate of soda, and digitalis. Brand, however, deprecates their use, and only employs them where bathing is inadmissible. The great advantage they afford is that of diminishing the frequency of the baths, but they do not produce so favourable an effect on the nervous system, and sometimes themselves cause unpleasant symptoms. Their great use, then, is as adjuncts to the bath, but they cannot be employed generally as substitutes.

The most important of these remedies is quinine. It probably reduces temperature by diminishing oxidation, its effect being to impair the oxygen-carrying powers of the red blood-globules. Quinine is very rapidly eliminated by the kidneys, and in order to obtain the antipyretic effect it is necessary that the blood should be highly charged with it. For this purpose, then, it is useless to give small doses at considerable intervals. One large dose should be given at once, or in divided portions within half an hour. To produce a decided fall of temperature in an adult, from thirty to forty grains are usually required. I generally give ten grains in suspension every ten minutes till the required amount has been taken. This will often depress the temperature three or four degrees, and this depression is often prolonged for many hours. It is best given at night-time, when the evening exacerbation is subsiding, or after the temperature has been lowered by a bath, as it exercises a greater effect on a falling than on a rising temperature. Given in doses of thirty or forty grains in typhoid, quinine often causes some of the disagreeable symptoms of cinchonism, as deafness and singing in the ears. These, however, are of little consequence; a far more serious effect is vomiting, which sometimes follows its use. This may be sometimes prevented by combining it with opium and administering ice.

Salicylate of soda, given in large doses, has a more powerful effect in depressing temperature even than quinine, and acts more rapidly. It has very largely replaced quinine in the treatment of typhoid fever in Germany, but after a pretty extensive trial of it, it appears to me to possess all the disadvantages of quinine, and in addition it often has a very depressing effect, so that I now never give it where there are symptoms of prostration or failure of the circulation.

The only other of these antipyretic drugs of which I have any experience is digitalis, and it appears to be universally well spoken of. Dr. Murchison, who had very little faith in the advantages of quinine, says that digitalis is far too much neglected. The antipyretic property of digitalis is probably due to its action on the vaso-motor system. The primary effect is to stimulate the vagus and so to slow the heart; in larger doses it accelerates the heart by paralysing the vagus; and in still larger doses it brings the organ to a standstill by directly paralysing its muscular fibres. With these effects it causes contraction of the small arteries, and so increases the blood-pressure in them and diminishes that in the veins. This effect appears not to be due to its action on the vaso-motor centres, but to its direct stimulation of the peripheral nerves. Now, this contraction affects the internal arteries, especially those of the mesenteric system, much more than it does the superficial vessels; hence the blood is diverted from the heat-producing to the heat-dissipating organs, and consequently the temperature falls.

Considerable care is required in giving digitalis as an antipyretic in fever. We must administer full doses, or no effect is produced on the temperature; but we must be very careful not to go beyond the first degree of its action on the heart. When so given, it diminishes the frequency and improves the tone of the pulse, and tends to counteract that general arterial relaxation which is so marked in severe fever, and at the same time it lowers the temperature. It is, however, a dangerous remedy where the heart is softened by acute granular degeneration, and therefore ill adapted for use in the later periods of fever, when the protracted high temperature has already caused more or less of the change to have taken place in the heart.

Such, then, are the principal means at our disposal for keeping the temperature down during the course of typhoid fever. We have now to consider what are the effects on the symptoms and course of the disease.

(To be continued.)

Bees in Paris.—According to the *Gazette Hebdomadaire* (April 9), an apiculturist, well knowing that sugar is the essential thing for the production of honey and wax by bees, conceived the ingenious idea of establishing great numbers of hives in the Quartier de la Villette, one of the populous districts of Paris, where sugar-refining, preserving, and confectionery are carried on on a large scale. The speculation answered well enough for the speculator, who resided in the country; but for the locality it has become a perfect nuisance. Clouds of bees are flying about, committing such havoc on the sweet provender, that one refiner declares he loses 25,000 frs. per annum by their ravages, while great expense is incurred in protecting the works and killing the insects, and removing the accumulated masses of their bodies. Moreover, the workmen and the inhabitants are constantly being stung. The Conseil d'Hygiène Publique has taken the matter up, and has agreed with Dr. Delpech, its inspector, that the placing of beehives in towns constitutes a dangerous establishment, which should be prohibited.

Phthisis in the French Army.—Dr. Marvaud concludes an elaborate statistical paper in the *Annales d'Hygiène* for March, on the relative prevalence of phthisis in the French Army and the civil population, by the statement that although the frequency of the disease turns out to be pretty much the same in both, yet the military profession presents certain conditions which may exert a different influence on the development of phthisis among soldiers. Among these conditions there are two only—viz., overcrowding in barracks, and exposure to chills and to the vicissitude of seasons—which seem evidently favourable to the explosion of tuberculosis in the Army, and operate in a less degree only on the civil population. The other conditions, such as the system of diet, the clothing, and especially corporeal and gymnastic exercise, seem to restrict the chances of young men contracting phthisis in consequence of a hereditary or acquired predisposition. These advantageous and disadvantageous conditions seem, so to say, to balance each other, establishing a kind of compensation which can alone explain the similitude and identity of the results furnished by statistics in relation to the comparative frequency of phthisis in the Army and in the civil population.

THE GULSTONIAN LECTURES.

ON EPILEPSY.

Delivered before the Royal College of Physicians.

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Lecture III.—Part II.

The treatment of epilepsy is a subject on which numerical analysis gives little help. A large number of cases are under observation too short a time to enable the effect of remedies to be fairly estimated, and, of the cases in which benefit is derived, we have no means of ascertaining how many relapse when treatment is discontinued. My notes of the result of treatment in this series extend to 562 cases only. In the remainder, either the period of observation was too short for a just conclusion to be drawn, or, in the press of out-patient work, the influence of remedies was not noted with sufficient precision. The effect of treatment is more likely to be recorded when it is distinct and considerable than when it is slight. Hence the following figures have no relative value. Of the 562 cases, the attacks ceased while the treatment was maintained in 241; doubtless many of these relapsed when treatment was discontinued, but in a few I have been able to ascertain that the patients remained free from fits even for years after they ceased to take medicine. In 266 cases improvement short of arrest was obtained; the fits being reduced in many to one-twentieth, one-thirtieth, one-fiftieth, and even one-two-hundredth of their former frequency. In fifty-five cases little improvement was obtained by any method of treatment.

Time forbids me to enter at any length on the details of treatment, and I can do little more than mention the remedies which in this series of cases were of most distinct service. The subject of possible modes of action it is better to leave almost untouched. It may be doubted whether a rational therapeutics of epilepsy is yet possible. At any rate, while we strive after a rational system, we must recognise the fact that, up to the present time, remedies used empirically have been of most service.

Although the results show that we must not only rely exclusively upon bromides in our treatment of epilepsy, they show also, as might be expected, that on these our chief trust must still be placed. Of the arrests of fits, 66 per cent., and of the improvements short of arrests, 62 per cent., were due to bromides given alone. Of the three alkaline salts of bromide, that of potassium deserves, I think, as it has popularly received, the first place. I have made a careful comparison between the salts of sodium and of potassium in a series of about fifty cases, substituting the one for the other. In a few cases the sodic salt appeared to do better; in the great majority it was distinctly less useful. Bromide of ammonium possesses slightly more power than bromide of potassium, but this is not greater than the larger quantity of bromide which it contains will account for.

The period after its administration at which maximum effect of a dose of bromide is obtained varies, I believe, with the dose. The larger the dose, the longer is maximum effect deferred; the smaller the dose, the sooner does it occur and the sooner is its action over. When small doses are employed in cases in which attacks occur at regular times, they should not therefore be given more than two or three hours before the attack is expected. This is contrary to some opinions which have been expressed, but I have several times known attacks arrested when a dose was given some two or three hours before the fit was expected, which were not arrested when the same dose was given twelve hours earlier.

The effect of bromide upon fits appears to be for a time cumulative, just as is, indeed, its action in causing bromism. Attacks may continue under its administration for a time, and yet ultimately cease without any increase in the dose. On the other hand, still later, tolerance, or rather indifference, may be established, and attacks which have been for a time arrested may ultimately recur.

Drugs which increase reflex action, such as strychnia, are now believed to do so by lessening the resistance in the nerve-centres involved. Bromide diminishes reflex action, antagonises strychnia, and it is probable that it does so by increasing the resistance in the centres. If the view above expressed be correct, that the morbid state in epilepsy is essentially an instability of the resistance in the cells, it is also probable that bromide acts by increasing the stability of this resistance.

Bromide is commonly administered in a continuous course, in such moderate doses as will just suffice to keep the fits in check. Given thus it needs to be given frequently. I have more than once observed that a daily quantity which given in two doses did not quite arrest the fits, arrested them completely when given in three doses. If, therefore, the greater convenience of infrequent doses, one or two daily, is preferred, a somewhat larger quantity needs to be given.

When bromide is thus given continuously, it has not seemed to me desirable to increase the daily dose beyond a drachm or a drachm and a half. If this does not arrest the fits, I have very rarely found that larger doses succeed so well as the combination of bromide with other drugs. But it is, I think, open to question whether this method of administration, using doses only just sufficient to arrest the fits, is the wisest in all cases. If bromide cures epilepsy, as without doubt it does sometimes, it must be by effecting a nutritive change in the nerve-cells corresponding to its action, whereby they are rendered permanently more stable. That it, or any other drug, does good in epilepsy by influencing the vascular state of the brain, appears to me without even probable proof. (Even if such were its action, we are only driven back to a similar influence in increasing the stability of the cells of the vaso-motor centre.) There are, I think, many grounds for the belief that the change in the nutrition of the cells may be produced more effectually by subjecting the patient *for a time* to the full influence of bromide, giving doses much larger than are needed to arrest the fits, in the hope of producing more readily a permanent nutritive change. In giving bromide thus I have preferred large doses at intervals of two or three days, gradually increasing the dose until it is as large as can be well borne, and then diminishing it. The largest single doses which I have given in this way have been doses of one ounce. This in some patients produces slight stupor, sometimes reaching its maximum on the second day after the dose. In other cases it produces very little disturbance beyond headache. From the marked differences which patients present in their tolerance, it is not well to begin this method of treatment with a larger dose than four drachms.

The value of the various combinations of bromide with other drugs was tested, as far as possible, on a uniform plan. First, bromide was given alone for several months, and then the additional drug was added to the same dose of bromide, and the result watched for several months longer. Of the various combinations which are in common use, those with digitalis and belladonna unquestionably deserve, as they have commonly received, the first place. Digitalis is one of the oldest remedies for epilepsy. It was recommended by Parkinson 200 years ago, and has been, perhaps for a still longer time, a popular remedy for this disease in certain rural districts in the West of England. I have met with no case in which, given alone, digitalis arrested the fits for more than a few months, but in several cases it effected very distinct improvement. The combination of digitalis and bromide, however, was distinctly more useful than bromide only, in no less than sixty-three cases. In more than half of these, thirty-seven cases, the attacks ceased under its use, although they had continued under bromide alone. In the cases in which cardiac disturbance was associated, the combination was almost always superior to bromide alone; but its use is not confined to these cases. Many cases of nocturnal and other forms of epilepsy yielded to the combination, although the attacks had continued under bromide, and this when there was no evidence of cardiac disease. I know of one patient with nocturnal epilepsy who, for two years, under this combination, has not had a single fit, although the attacks occurred every few weeks on bromide only.

In rare cases belladonna alone will arrest attacks. I have met with only one case in which attacks, which continued on bromide, ceased entirely when belladonna was substituted, and this was a case with hystero-epileptic symptoms. The combination of bromide and belladonna, however, was distinctly better than bromide alone in thirty-five cases, and in fifteen of these arrest of the fits was thus obtained.

Indian hemp was first employed in epilepsy by Dr. Reynolds, and is sometimes of clear value. In one case the attacks were invariably arrested for many months by its use, recurring only when the patient ceased attendance, but twice on his resuming attendance, the drug instantly arrested the attacks. When bromide was substituted for the Indian hemp the attacks at once recurred. Combined with bromide it is also sometimes useful, and seems to exercise most influence over attacks in cases in which there is persistent headache. The same fact has seemed true of the combination with gelseminum, which is occasionally of marked service.

The use of opium in epilepsy has long been advocated by Dr. Radcliffe, and in some cases it is certainly effective. The combination of bromide and morphia I have rarely found to present special advantages. In the *status epilepticus* in which attacks occur with great frequency and severity, and where bromide, even in large doses, was useless, I have found small hypodermic injections of morphia of great service.

The combination of bromide with aconite and hydrocyanic acid I have also tried, and found it in some cases slightly better than bromide only. The addition of iodide to bromide has been lately said to increase its effect. Occasionally this is true, and in four cases of the series the combination was distinctly better than bromide only, but in many other cases it was ineffective. Even in the cases of epilepsy in the subjects of inherited syphilis it has not appeared of special value.

Zinc unquestionably deserves some of the repute it has enjoyed for more than a hundred years as an anti-epileptic. Of the cases of this series in which it was employed it was distinctly useful in ten, but in only three did the attacks cease. In three other cases attacks which continued under bromide ceased under bromide and zinc, and in a fourth they ceased under zinc, digitalis, and bromide. The oxide of zinc was the form commonly employed. Its nauseating influence constitutes a serious drawback to its use, as toleration is difficult to establish, and I have rarely succeeded in giving more than twenty grains a day. Bromide of zinc has seemed of small value, and is borne badly. The addition of arsenic to bromide in no case produced any marked effect on the attacks. It was used in a large number of cases on account of the readiness with which, it was found, the bromide rash could be prevented by its use.

Bromide of camphor, highly praised by Bourneville, was tried in a considerable number of cases, but without any good results. Turpentine has been recommended by Dr. Radcliffe, and I have seen it produce very striking benefit, but only in cases of hystero-epilepsy.

The use of iron in epilepsy has been discountenanced by high authorities, on grounds which are not altogether beyond question. In rare cases it increased the frequency of attacks; in the majority of cases in which it was used it was borne without any ill result; in many the addition of iron to bromide was attended with a marked and permanent improvement, and in some cases iron alone arrested the fits. The series includes four cases which ceased under iron only, and eight others in which iron alone was distinctly better than bromide, and nineteen cases in which the addition of iron to bromide exercised a marked influence. In no less than eleven of these cases, attacks which persisted on bromide ceased on the addition of iron, and remained absent as long as the treatment was continued.

In several inveterate cases of epilepsy, in which bromide had no effect, I have tried borax. In some cases it did no good, but in twelve its value was most distinct. I may mention one or two. In one, fits which had continued on bromide and on zinc ceased entirely on borax for three months, and then only recurred when the medicine was discontinued. In another case the fits continued, about one weekly, during three months' treatment on bromide and on belladonna. Borax was then substituted: the fits at once ceased, and for five months the patient had not a single fit; then he had one in each of the two following months. The dose of borax was increased; and up to the present time—eight months later—no other attack has occurred. In a third case, one or two attacks occurred once a fortnight on bromide. Borax was substituted, and for five months the patient had not a single

fit. The doses given have been ten or fifteen grains twice or three times a day. It produces in some patients gastro-intestinal disturbance, and rarely a form of dysenteric diarrhœa. By others it is well borne, and one of my patients has taken forty-five grains a day for twelve months without the slightest inconvenience, and says that no medicine has ever done him so much good. In cases in which bromide fails, borax certainly deserves a trial.

The use of cocculus indicus in epilepsy, recommended by Dujardin-Beaumetz, has lately attracted attention in consequence of the recommendation of Planat. I have tried the alkaloid picrotoxine in a few instances, but in only one case has it appeared to do good. My own experience of its use has, however, been small, and I am very much indebted to my colleague, Dr. Ramskill, for permitting me to mention some interesting results which he has obtained by the hypodermic injection of picrotoxine. His experience of its effect on the fits when given through the skin is nearly the same as my own of its employment by the mouth. In seven cases in which it was injected, in daily doses of from one to four milligrammes, no beneficial result was obtained; in most cases, indeed, the attacks were rather more frequent and severe. Of course, we are not justified in assuming that the effect of picrotoxine and of the cocculus indicus itself are identical. A very interesting fact has, however, been ascertained by Dr. Ramskill—viz., that picrotoxine in larger doses of from fifteen to eighteen milligrammes will almost invariably produce a fit in twenty or thirty minutes. In one patient, for instance (according to the notes of Mr. Broster, who carried out the experiments), the dose was daily increased, and when more than five milligrammes were injected a sensation of giddiness followed, similar to that with which the attacks commenced. The same effect followed larger injections, and when the dose reached eighteen milligrammes a severe attack occurred in thirty minutes, and an attack always followed the injection of this dose. In another patient a similar progressive increase of the dose was followed by giddiness and headache when eight milligrammes were injected. When the dose of fifteen milligrammes was reached a severe epileptic fit followed. Next day a second dose of fifteen milligrammes did not cause a fit; but eighteen milligrammes, two days later, caused a fit in half an hour. After a week's intermission, twenty-four milligrammes were injected, and a severe fit occurred in twenty-five minutes. In a third patient a fit occurred after one injection of eight milligrammes, but ten milligrammes next day caused no fit. Fifteen milligrammes, however, were followed by a fit in thirty minutes; and a second injection of the same dose the following day caused a fit in fifteen minutes. Seventeen milligrammes next day caused a fit in thirty minutes. In a fourth patient a single dose of eighteen milligrammes caused, in ten minutes, giddiness and slight dazzling before the eyes, and in thirty minutes there occurred the usual aura of an attack—a sensation of something creeping up the right arm to the top of the head, and numbness and twitching in the right thigh,—but no fit followed, although the patient was stupid and dull for a time just as after a fit.

Among other drugs which I have tried and found useless I may mention benzoate of soda and nitro-glycerine.

In hystero-epilepsy, bromides, sometimes useful, fail entirely much more frequently than in simple epilepsy, and the combinations with digitalis and belladonna are also less frequently useful. Iron, especially guarded by aloes, is often of the highest value, quite apart from the existence of anæmia, and next to it valerianate of zinc, morphia, and turpentine.

High authorities have urged on different grounds that the diet of epileptics should contain little or no animal food. In a few observations which I have made by keeping a patient under unaltered medicinal treatment for alternate periods on a diet with and without animal food, I could observe no difference in the attacks, except that in one patient they were slightly more frequent in the periods when animal food was excluded, and in one patient hystero-epileptic attacks on ordinary diet became, when meat was excluded, severe epileptic fits, and again became hystero-epileptic when animal food was restored.

In pure epilepsy the only treatment needed during the attacks is such care as shall secure the patient, as far as possible, from injury. It is very different with the attacks of hystero-epilepsy, which, from their character, severity, and long duration, often furnish the attendants with a task of no small difficulty, and which can, almost always, be cut short by appropriate treatment. The patients often hurt themselves during the attacks, and some control is absolutely necessary. But, as already stated, restraint tends to increase the violence and makes the paroxysm last longer. Hence considerable judgment is often required, so to adjust control as to be efficient and not too much. I have seen these patients put within padded partitions and left alone, but I have never myself found this necessary.

The slighter attacks can be arrested by closing the mouth and nose with a towel for some thirty seconds, after Dr. Hare's method. The profound effect on the respiratory centre, and the related higher centres, caused by the anoxæmia, seems to arrest the convulsive action. Cold water over the head is often successful if applied freely; in severe attacks a moderate quantity only excites redoubled violence, while a second gallon is often more effectual than the first. This has the disadvantage of drenching the patient's head, and often given cold. When the mouth is open during the attacks a small quantity of water poured into it is often successful. A much more convenient and more effectual remedy than water, however, is strong faradisation to the skin; applied almost anywhere it will commonly quickly stop the attack. Of ovarian compression I spoke in the last lecture. In this country it is rare that ovarian pressure will arrest an attack. In some cases all these means fail, even when thoroughly used; and I have known such attacks go on, in spite of skilled treatment, for several hours. Chloroform is of little use; its administration is a matter of extreme difficulty, often impossibility, and the attack is commonly renewed when the influence of the anæsthetic passes off. The remarkable effect of nausea in relaxing spasm led me some years ago to try the effect of injections of apomorphia, and I have found in it an unfailing means of arresting the attacks. After the injection of a twelfth of a grain in four minutes, with certainty, all spasm ceases, and normal consciousness is restored; in six minutes the patient will get up and go to the sink; in eight minutes will vomit; and afterwards, except for slight nausea, is well. A twentieth of a grain has the same action, but is rather longer in its operation. Moreover, I have found that the treatment is, so far as the hysteroid symptoms are concerned, curative as well as palliative, for the attacks in many cases ceased after a few paroxysms had been thus cut short.

I regret that in this survey of some points in the clinical history of these diseases it has been necessary to omit all reference to many facts regarding symptoms, diagnosis, and prognosis, which are presented by the series of cases analysed. I am conscious that as it is, in the details I have introduced, I have made a large demand upon your patience. But it is only by ascertaining the facts of these diseases that we can hope to learn their nature, or to find the guidance in our efforts at prevention or at cure.

Whatever may have been the nature of the demoniacal possessions of old, few, who have watched an epileptic fit, can doubt that they have their representatives among us still. The old power of casting them out has gone from the earth; and it is only by the study of their origin and history, and careful experiment in their treatment, that we can hope to regain over them such power as may still be possible to man. And the present generation has witnessed an advance in the treatment of these diseases, equalled in perhaps no other branch of therapeutics. Thanks to the influence of one drug, the use of which in epilepsy is due wholly to Fellows of this College, hundreds of epileptics have been cured, and thousands are leading useful lives who would otherwise have been incapacitated by the disease. Although the condition of many sufferers is still gloomy enough, it is not without hope, and to them also, we may surely trust, the progress of the recent past is the dawn of a brighter day.

Consumption of Quinine.—According to a statistical calculation of the amount of quinine consumed in the universe, it appears that 100,000 kilogrammes of the sulphate, valued at 56,000,000 fr., are consumed annually. If we add the value of the other salts—as the chlorhydrate, bromhydrate, etc.,—which may be put at about 2,000,000 fr., we have a total of 58,000,000 fr. expended for this one drug annually.—*Presse Méd. Belge*, April 4.

ORIGINAL COMMUNICATIONS.

CASE OF STONE IN THE BLADDER IN THE FEMALE.

By A. GARDEN, M.D.,
Surgeon-Major, Indian Medical Department.

Basilea, a small girl, aged three, but not looking much more than two or two and a half years, was admitted into the Cawnpore Civil Hospital on September 2, 1879. She presented all the subjective symptoms of stone in the bladder in a most severe form. There was frequent micturition accompanied and followed by intense suffering, as was very evident from the child's looks of agony, and loud cries, and also by such an amount of straining that it seemed as if the whole pelvic contents must be forced out, whilst at the same time there was a large rectal protrusion. The mouth of the urethra was much irritated and sore, and surrounded by a collar of swollen mucous membrane. In all other respects the child appeared healthy enough, and was plump and well nourished. The duration of the symptoms was stated by the parents to have been only six months, and no amount of questioning could get any other reply. A small sound was introduced without difficulty, and a large stone felt, which after careful examination I concluded to be about the size of the last joint of an ordinary adult thumb.

After much consideration and consultation with Surgeon G. Harris, Indian Medical Department, I proceeded on September 4, with the kind assistance of that officer, to remove the stone, chloroform being administered by Assistant-Surgeon Hem Chunder Bhuthucharyi. The operation was the usual simple one recommended by Fergusson, by combined incision of the anterior two-thirds of the urethra, and rapid dilatation of the remainder and of the neck of the bladder. Owing to the extreme smallness of the parts there was some difficulty in carrying it out, and extreme caution was necessary in making the incisions, which were bilateral, to avoid wounding the vagina on the one side, or the pudic vessels on the other. After completing the incisions, rapid dilatation was carried out. For this purpose I had to use the only instrument available, a bivalve ear-speculum: with this sufficient room was obtained in about five minutes to introduce into the bladder first the finger, by which further dilatation was made, and then a pair of forceps. For extraction I employed a pair of large polypus-forceps made by Charrière, of Paris, as the ordinary lithotomy-forceps were far too large. There was no difficulty in seizing the stone. The extraction was made with extreme caution and slowly, as the most important portion of the dilatation of the neck of the bladder had to be done during this part of the operation. Considerable resistance was experienced at first, but this gradually yielded, once giving a sensation as if some fibres or structure had given way. Once the largest axis of the stone and forceps combined had passed the neck of the bladder, all resistance ceased, and the operation was virtually finished, as the bilateral incisions allowed the lower wall of the urethra and the vagina to be largely depressed. The calculus was composed of urates, and was of the usual ovoid, somewhat flattened shape, and of the following dimensions:—Length, 1·37 in.; breadth, 1 in.; thickness, 0·75 in.; circumference in short axis, 2·87 in.; circumference where grasped by forceps, 3·06 in.; the thickness of the closed forceps was about 0·125 in. The child was put to bed, cold carbolised dressing applied, and the knees kept tied together.

The further history of the case may be given in a very few words. At first for a few hours the urine caused smarting; but beyond this, from first to last, the child had not one untoward symptom. The immediate relief to the terrible suffering was self-evident. Fever never occurred from first to last. On the third day the constant dribbling ceased, and urine could be retained for a short time. On the thirteenth day there was no incontinence, but the lateral incisions were not completely united. Her parents insisted on taking her home, but brought her back on the seventeenth day with incontinence. She had evidently been allowed to run about. The wound had opened again, and the urethral orifice was preternaturally large. She was kept absolutely at rest. The wound healed and contracted, and she was discharged quite cured on the thirty-seventh day after the operation.

Great as is the interest that must always attach to the subject of stone in the bladder, special circumstances can alone justify the publication of single cases, or even small groups of cases. At the same time it must be admitted that the careful study of individual cases may be more instructive than that of mere figured statements, however extensive. The above case may be said, I think, to possess some such claim.

A passing allusion to the great rarity of vesical calculus in the female is all that is required. Whatever may be the assigned causes of the disease—malarial infection, diseased spleen, rheumatic complaints, lowered nerve and digestive powers, coarse indigestible food, waters rich in lime, etc.,—it is difficult, in India at any rate, to think of the women at large as less exposed to them than the men; and this is especially the case with children, who form so large a proportion of those coming under treatment. One is thus forced to the conclusion that this comparative freedom must depend on such special anatomical conditions as the shortness, straightness, and greater dilatability of the female urethra, which allow of most nuclei, and even small stones, passing away without surgical interference. For this reason it is impossible almost to come to any conclusion as to the relative proportion of the sexes afflicted with stone. The number forced to seek aid is extremely small: thus of 1040 cases in the Saharunpore Dispensary, only ten were females. This is much below the European average, viz., one in twenty.

Much valuable information, compiled under the direction of Dr. Walker, on the statistics of stone in the bladder in the N.W.P., will be found in the Annual Dispensary Reports of past years. As they are mere "operative" statistics, not dealing with such a minor consideration as sex, no information can be gained from them. Dr. Sanders recently had two cases in 100, which would give one in fifty, but these figures are by no means extensive enough. It is highly probable that a large number of cases never come under observation as the result of "purdah nusheen."

As regards age, if any deduction can be allowed from such a small number as ten, the proportion of cases under ten years of age is more marked even than amongst males: thus five, or one-half, were of ten years and under, whilst 30 per cent. is the proportion for males. The age of my patient, three years, is nothing very extraordinary; thus of the 1030 cases amongst males, forty-five were of three years and under, one being only of eighteen months. From the size and weight of the stone it is a fair conclusion that its formation had commenced not long after birth. This is a very difficult matter to decide, for it is far from easy to get any information from patients or patients' friends that can be the least guide.

Few adults can give more than a guess even as to the date at which their symptoms were sufficiently troublesome to call their attention to them, much less as to the time of actual commencement. The largest stone I ever extracted (weighing twelve ounces) was said by the patient to have been in existence only two years. In fact till I saw him it had been neither diagnosed nor known, and the patient himself could recollect no uneasiness or suffering anterior to the two years during which he had been treated for cystitis. The weight in the present instance was 220 grains, a size to which only 18 per cent. of the calculi extracted from children under five years of age reached, and the majority of these gave no shorter period of duration of symptoms than one year. This period by no means necessarily coincides with the duration of the stone, especially in young children, the knowledge of whose symptoms is dependent on by no means observant parents. In the above case the duration was given as six months. This was simply the period of the existence of the more severe symptoms. Probably the child had suffered for a very long period, and its cries and uneasiness been put down to naughtiness or any but the right cause.

On so trite a subject as the symptoms nothing need be said. Perhaps the most remarkable symptom was the rectal protrusion dependent on reflex irritation. This is common enough amongst male lithic children, where there is direct union between the rectum and bladder. The pouting of the mucous membrane at the urethral mouth is also noteworthy; as also the violent straining, which put me in mind much of the downward straining and pressure in childbirth.

The size of the stone was "large." Largeness is an entirely relative term, for the small or medium-sized stone in the adult is undoubtedly large in a small child. In fact, the dimensions given above, as compared with the diameters of the pelvic outlet covered by the soft parts, place it in the category of the very large stones, for it must be remembered that it had to be withdrawn through the arch of the pubis and as much of the antero-posterior space as could be obtained by operative measures by depressing without injuring the vagina. It is a difficult matter to judge, but, as far as I could make out, the utmost breadth between the tuberosities of the ischia was not more than an inch and a quarter to an inch and a half, and the depression of the vaginal wall certainly could not be caused further than that, so that in extracting the stone per urethram the fit must be looked upon as having been very close. The problem to be solved was how to get so large a stone through so small an outlet without causing permanent damage to the soft parts and sphincter, and without leaving incontinence, and this it was that gave so much food for reflection.

In the first case of stone in the female I ever operated on (twenty years ago), operating with the greatest care, the stone being very large and the outlet small, the bruising led to sloughing, which ended only in death. The impression of dismay caused by this case has never left my mind. In the adult female no such cause for hesitation or doubt exists. The dilatability of the female urethra, etc., and the rapidity with which it recovers its normal state, are well known. As examples of this I may be allowed to quote two cases, published by me in the *Indian Annals of Medical Science* in 1867, and so probably as good as new:—

Case 1.—Musst Dovree, aged forty. Duration of symptoms five years; had not retained urine for two years. General health seriously impaired. Operation: Rapid dilatation with bilateral urethrotomy. Stone found grasped closely by bladder, and seized with difficulty, but successfully withdrawn. Calculus: Weight 1080 gr., size 2′ 2″ × 2′ 1″ × 2′ 1″, *i.e.*, a nearly globular stone of 2′ 1″ diameter. Composition fusible. Result: On the fourth day she retained her urine for ten or fifteen minutes, and on the ninth day for six hours. She was discharged on the sixteenth day with complete control over her bladder.

Case 2.—Musst Fabboo, aged fifty. Duration of symptoms ten years; urine not retained for eight years. Great emaciation. Pudenda excoriated and inflamed from constant dribbling of the urine. Fourteen days before she was first seen two small pieces of calculus had been broken off. The urethra was very much dilated and reduced to $\frac{1}{4}$″ in length, the stone presenting at its orifice. Operation: Forceps introduced without further dilatation; stone seized and removed. Calculus: Weight, 168 gr.; size, 1′ 2″ × 9″ × 8″; shape, oval; composition, water, lime, and fusible. The recovery was rapid, for by the eighth day she had sufficient control over her bladder to enable her to go to her home in comfort.

In children, of course, the matter is different, the space at command being very limited and the parts so much smaller.

The great aim in operating on the female is so to act that no permanent loss of control over the bladder may result, for such would condemn any female to a life of misery.

The operations available and named in books are five—

(*a.*) Removal through the vagina; the vesico-vaginal operation.

(*b.*) Lithotrity.

(*c.*) The supra-pubic operation.

(*d.*) Dilatation of the urethra, with or without urethrotomy.

(*e.*) Lateral lithotomy.

(*a.*) Removal through the vagina is an operation that, in my opinion, nothing can justify. Even had it been justifiable in the present case it would simply have been impossible from the minuteness of the parts.

(*b.*) Lithotrity must be placed out of the question in this instance. There were no lithotrites handy; and the delay requisite to obtain them was not to be dreamt of considering the poor child's suffering. In one instance I kept a child long waiting until I could get lithotrity instruments. I crushed the stone once, and never saw my patient again. The delay and want of immediate results apparent to the eyes and minds of people accustomed to lithotomy, and the visible stone extracted, exhausted their patience, and off they went. I had expected as much. With lithotrites of suitable size at command I should not hesitate one moment to employ this operation in a case like the present.

(*c.*) *Supra-pubic Operation.*—This operation I have performed once, and with the most satisfactory success. The child, though aged six, was small, and the stone I judged to be larger than it ultimately proved to be. I met with no difficulty in opening the bladder above the pubes and removing the stone. No bad symptoms followed, and cure was completed in three weeks. I should not probably feel inclined to try it again except in some very exceptional case.

(*d.*) Dilatation, with or without urethrotomy, is the most simple and the best in adults. In so small a child as my patient there was the natural fear that the distension might be so great as to lead to paralysis and permanent incontinence; and I must confess that when she was brought back the second time I much dreaded this. It is unnecessary to detail the steps of the operation. The parts were so small, and the difficulty of getting at them so great, that the utmost caution was required. Great care surmounted all these difficulties, and final success justified the proceeding.

(*e.*) Lateral lithotomy in the female seems to me an operation, if not impracticable, at any rate one that never can be called for.

In the adult, dilatation, with or without urethrotomy, appears to me to be the shortest and simplest means of removing even large calculi. In young children, where the stone is large, litholapaxy or lithotrity, combined with dilatation, would apparently furnish the speediest and best means of getting rid of the disease.

ATROPHY OF OPTIC NERVES OCCURRING ABOUT PUBERTY.

By CHARLES HIGGENS, F.R.C.S.E.,
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The following are cases of atrophy of the optic nerves occurring in males about the age of puberty, without apparent cause. The two patients are brothers, and a third brother is said to have bad sight. There are five children living, four of them being boys. It is worthy of remark that of these two certainly, and a third probably, should be affected by atrophy of the optic nerves, the failure of sight being first noticed about the age of puberty.

Case 1.—W. H. R., aged fifteen, a telegraph clerk, employed in a railway signal-box, came to me November 7, 1876. Three weeks ago vision of left eye began to fail, and was soon almost entirely lost. Three days ago the right eye failed in a similar manner.

Left eye, vision $\frac{20}{0}$; right, vision $\frac{20}{200}$. In the right eye peripheral vision is considerably better than central; in the left, central vision is reduced to perception of light.

The ophthalmoscope shows hypermetropia, extreme retinal hyperæmia, and slight blurring of the inner margins of the optic discs. No swelling, exudation, or hæmorrhages.

Patient is one of a family of twelve, seven of whom (five males and two females) died from whooping-cough or measles when quite young; of the five living, four are boys. Two other boys (one of them being Case 2) have bad sight; the other is quite young. All the twelve children were healthy at birth. The father died of bronchitis three years ago, aged seventy-four; had always enjoyed good health. Mother suffers from cough; has had two miscarriages. Patient was ordered mercury and iodide of potassium.

January 11, 1877.—Margins of discs well defined; outer halves, especially in the left eye, are pale. In both eyes peripheral vision is good; in central parts large objects as the hand can be seen through a mist.

February 12.—Discs quite well defined; outer halves white, inner pale; central vision *nil*; periphery of field nearly normal. Iridectomy, downwards and outwards, performed in both eyes.

June 4.—Both optic discs pearly white; vision the same.

March 1, 1880.—Patient had been seen occasionally up till about the middle of 1878. The optic discs are in the same condition as on June 4, 1877. Patient thinks vision is unaltered; he can find his way about without difficulty.

Case 2.—George R., aged sixteen (brother of Case 1), has done only labouring work. Came to me about the same

time as the previous patient. His vision failed in much the same fashion as his brother's. The ophthalmoscope showed hypermetropia, and in the early stages the same intense retinal hyperæmia and redness of the optic disc, followed later by atrophy. He was treated by weekly or fortnightly application of the artificial leech.

On January 4, 1880, patient (Case 1) told me his brother could still see to work, and had got no worse during the last two years.

Remarks.—Iridectomy was performed in Case 1 because of the central scotoma. At that time I believed that the operation might improve vision, and performed it in many cases of atrophy of the optic nerve where central vision was not particularly affected. In two cases marked improvement took place, and—though I did not see how—I thought that the operation had done good. Subsequent experience, however, has taught me that the improvement, though it followed, was not due to the iridectomy.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

LONDON HOSPITAL.

CASES FROM THE SKIN DEPARTMENT.

(Under the care of Dr. STEPHEN MACKENZIE.)

Urticaria Pigmentosa.

A. F., aged fifteen months. The patient is the fourth child of its parents, in neither of whom is there any history of syphilis. The other children have all been healthy, and have not suffered from eruptions.

The patient was born at full term. It is still at the breast. It has never had jaundice. It has not been observed to be bitten by fleas or other insects especially. There appeared nothing peculiar about it at birth. When it was three days old the person who washed it noticed "large brown patches" over the chest, stomach, and back. The "patches" were very large, and ran into each other. They were of a dark brown colour, and were not raised above the level of the surrounding skin; they "seemed to lie in the skin." No irritation of the skin was at this time observed. From the day when the eruption was first detected until the present time the eruption has persisted. It has not altered much in character, the mother says, except to become paler. It is only within the last month that any irritation of the skin has been noticed. Now, when he scratches himself, "large white lumps" come in the skin. "The lumps are as big as the top of my finger," the mother says, "white in the middle, and red round." Washing always brings out the bumps. They last only a short time. The irritation of the skin occurs chiefly at night, and keeps the child awake.

The patient is a healthy-looking child, well grown for its age. When undressed, the chest, abdomen, and back are covered with irregular islets of buff, and buff and pinkish coloured skin, slightly raised above the level of the intervening healthy skin. The patches vary in size from a pea to the irregular-sized patches larger than sixpence. The eruption, chiefly situated on the parts mentioned, extends a little down the front and inside of the thighs, down the inside of the arms, and slightly invades the neck. It is only of late that it has reached the thighs and neck.

When first exposed the eruption is, as above said, of a buff colour; but the irritation of the air causes the child to rub the parts, and the raised patches become more raised, and of a bright pink. On the cessation of the irritation, in a few minutes the colour relapses to its original buff, and the swelling subsides to its usual degree. More severe irritation, as severe scratching, in a few seconds brings out large papules and wheals on a pink base. On one occasion a small bulla was observed. The skin feels natural where it is affected. There is no eruption on the mucous membrane of the mouth.

Remarks.—This is a good example of a somewhat rare disease to which attention has in the last few years been called, and concerning the nature of which differences of opinion have been expressed. In most of the recorded cases of this disease the eruption began at periods from six weeks to three months from birth. In one of the late Dr. Tilbury Fox's cases the eruption made its appearance when the patient was ten days old; in this case the eruption appeared when the child was three days old. It began as brown (red, rather, I should imagine, as people of the poorer classes often term what we should call red and pink, "brown") patches *in* the skin (? erythema). When seen, there was no question that the disease was associated with urticaria, and that the patches were urticarious, for when the buff-coloured patches were rubbed they became more raised and red, and ultimately subsided to their original condition. It seems to me that the disease connects erythema with urticaria—erythema urticans (not in the sense of Hebra)—and that the persistent hyperæmia of the skin leads to an urticarious condition. I have another case under observation, of patches of exudative erythema on the back of neck and shoulders, with factitious urticaria, which I believe will ultimately develope into the same condition, though at present the wheals are not buff-coloured. A somewhat similar condition of skin—buff-coloured, more or less raised patches—is not unfrequently seen in connexion with lichen prurigo of infants. Whatever the primary condition, the name "urticaria pigmentosa," suggested by Dr. Alfred Sangster, I think describes the characters of the developed disease very well, and may be accepted, at least provisionally. The buff colour of the patches is, I believe, produced by diapedesis of coloured blood-corpuscles taking place during the wheal stage, and the corpuscles subsequently disintegrating and staining the skin. A certain degree of hyperplasia of some of the tissues must also occur, accounting for the elevation of the patches. I have tried various local applications for the relief of the itching of the skin; what has answered best has been a lotion of carbolic acid—a drachm to a pint of water.

Papillary Growths of Nervous Distribution.

J. H. aged sixteen, of fair complexion, light brown hair, and grey eyes.

There are a number of papillary elevations varying in size from a pin's head to half a split pea, along the right half of penis, dorsal and under surface, and right half of scrotum, where they are limited exactly by the raphe. They extend round the right side of the perineum, and involve the inner side of the right buttock. There are a few at the lower margin of the right gluteal fold; and a rubbed patch on right buttock and to right of gluteal fold. There are scattered papillæ over a good part of the inner surface of the thigh, and an aggregated cluster at the junction of the middle and lower thirds of the inner surface. There is a cluster at the inner aspect of the knee. There is a well-marked clustered linear group extending down the anterior aspect of the thigh, continuous above with a group on the scrotum, and evidently distributed along the course of the genito-crural nerve. There are none on the outer aspect of the thigh, and none below the knee. On the right upper extremity there are a number of minute, dry, scaly brown papillæ on the inner side of the arm and contiguous part of the axilla; some scattered red papillæ extending linearly down the inner side of the arm for about two inches, just above the elbow; and between this point and the papillæ at the upper part of the arm an indistinct papillary line can just be made out. At the inner and posterior part of the forearm is a linear patch of papillæ, about three inches in length. The papillæ are for the most part flat-topped, but their summit is irregular and warty-looking; they are shiny, of pinkish-red colour, with little or no scale, as a rule. They are sometimes solitary, sometimes aggregated into large patches. There are a few acne spots on his face and neck, where the skin is rough. These conditions affect equally the two sides. His grandmother says that she saw the lad when he was a few weeks old, and that his mother then pointed out a number of little red pimples, varying in size, on the inner side of the right thigh. When three or four months old she noticed that they were increased in number—"scattering," to use his expression,—and that they were very red, rough, and scaly. They used to be very irritable at night, so that he could not sleep. He used to scratch himself very much. When five years old he had paraphimosis. At that time there was a mere streak or seam on the penis, but after this they spread on to the penis. The patient himself says that he has had the spots on his thigh

and penis as long as he can remember. Some years ago the spots left the thigh, but not the penis, and he remained free from them on his thigh for some years. About a year ago they again came on the thigh, where they began as little red pimples, and have gradually reached their present size. He thinks new warts have come on the end of the penis within the last few years, but the other spots have only increased as he has grown. The eruption on the arm has been there as long as he can remember. His mother was a fair-complexioned woman. She married at twenty-three. She was healthy at the time of her marriage, and had no illness when carrying the child, which was born two years after marriage. The father was seventeen years of age when he married, of fair complexion, and, from the description given, suffers from eczema or erythema of the hands in cold weather. Neither parents have had rheumatism. The grandmother says that the mother's family is "scorbutic," by which she appears to mean subject to psoriasis.

Remarks.—This is another rare form of skin disease. The distribution of the eruption, evidently along the course of cutaneous nerves, suggests a resemblance to herpes zoster. This, and the fact that the disease is evidently of congenital origin, have led Mr. Hutchinson to express the opinion that the disease is possibly due to intra-uterine herpes. At any rate, like herpes zoster, and perhaps morphœa,(a) the eruption is determined by the track of particular nerves. In this case the eruption was situated along the course of the genito-crural, ilio-inguinal, small sciatic, and internal and middle cutaneous nerves of the right lower extremity; and along the intercosto-humeral and internal cutaneous nerves of the right upper extremity. The determination of the particular nature of the eruption in the cases of herpes, morphœa, and papillary growths is dependent on conditions not yet understood. It is important to note that the eruption in this case was limited to one lateral half of the body. This suggests that the lesion of the nerves upon which the eruption depended, or by which it was distributed, was connected with a morbid condition of the spinal cord from which the nerves arose. Though probably present from birth, the lesion exciting the eruption would appear to have intermittingly continued, for it is clear from the history that the range of the eruption has extended. It may be noted that herpes zoster is almost unknown in infancy.

Remarkable Case of Precocious Viability.—Prof. Bailly reports the remarkable case of a viable infant at the age of six months and twenty days. The mother had a miscarriage at the beginning of 1877, after which menstruation became regular, taking place for the last time from July 3 to 9, 1877. On January 28, 1878, she gave birth to a male infant. This was wrapped in wadding and kept in an artificial temperature. It was fed at first by diluted cows' milk, and afterwards with its mother's milk, being unable to suck at first. At its birth the ring of its father passed over its foot to near the knee, and on the thirteenth day the infant weighed 1250 grammes. At the end of a week it began to take the breast. At the date of this report, December, 1879, the child had sixteen teeth, weighed ten kilogrammes, walked with agility, could pronounce some words, and was as intelligent as other children at that age.—*Archives de Tocologie*, December.

The Salts of Copper as Antiseptics.—Dr. Burq read a paper on this subject at the Académie de Médecine (*Gaz. Hebdom.*, April 2), giving an account of numerous researches upon it which he has been making. From these it seems to result that in epidemics of cholera workers in copper and in military musical instruments have enjoyed a singular immunity from this disease, the exceptions being as rare as cases of small-pox after vaccination. Dr. Burq also states that copper impregnation is a similar preservative against typhoid fever. Further, he adduces many facts to show that copper is an important remedy in cholera when given in sufficient doses, this remedy, according to his experiments on animals, being a much less dangerous agent than is usually supposed. Dr. Pidoux observed that in the epidemic of cholera in 1866 he had yielded to the solicitations of Dr. Burq, and handed over to him thirty cases of cholera to treat by copper. All these patients died.

(a) "Lectures on Clinical Surgery," by Jonathan Hutchinson, vol. i., page 314.

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Medical Times and Gazette.

SATURDAY, APRIL 24, 1880.

THE INDIAN MEDICAL SERVICE.

Officialism, or red-tapeism, is a wonderful fetish, and the strict cult of it must be observed according to the very straitest ritualism, even with the certainty of thereby wantonly and uselessly exciting among the members of a large and important public service feelings of alarm and indignant discontent that might, apparently, have very easily been avoided. We publish to-day the General Order regulating the administrative staff of the Civil Branch of the Indian Medical Department, dated March 15, 1880; and there will be general regret and wonder that it was not made public together with that relating to the Military Branch, which was issued at the beginning of January. From this last General Order it appears that the Civil Medical Service in India is to be administered by three Surgeons-General; one "with the Government in India," and one in each of the Presidencies of Madras and Bombay, and four Deputy Surgeons-General with local rank as Surgeons-General; so that the rank of Surgeon-General is far from being abolished in the Indian Medical Service, and that service will lose only two Deputy Surgeons-General, the same number as the Army Medical Department loses by the reorganisation. And this loss is fully made up for by the grant of an increase of rank and pay to five Sanitary Commissioners. The Sanitary Commissioner of Madras, of Bombay, of Bengal, the North-Western Provinces, and the Punjaub, will, in future, have the rank and privileges of a Deputy Surgeon-General as soon as he attains twenty-six years' service, or as soon as the officer below him on the list is promoted to the administrative grade. The five years' tenure of office by a Sanitary Commissioner in each province will reckon from the date of his attaining the rank and privileges of a Deputy Surgeon-General; and these new rules will apply to officers now holding the appointment of Sanitary Commissioner in the Provinces named above. It is not easy, however, to understand

clearly, as yet, what the full effect of the changes made by the new Orders will be. At first sight it would appear that the Military Medical Department is to be administered by a staff of British officers, while the Civil duties are to be entrusted to a staff of officers of the Indian Medical Service; but this latest Order says that the Surgeons-General with the Government of India and with the Governments of Madras and Bombay "will, in addition to performing Civil administrative duties, be Heads of the Indian Medical Department in their respective Presidencies." It is to be their duty, among other matters, "to propose transfers between the Military and Civil Departments; to recommend for promotion to the administrative grades; and to advise the Government on all questions relating to the officers and subordinates to the Indian Medical Service, to the conduct and services of Indian medical officers of all grades, and to the supply of medicines and hospital stores." Selections for the new administrative offices will be made in each Presidency, "from the whole Indian Medical Service of that Presidency"; and the principles of selection hitherto followed in making such appointments, and apparently the rules regulating retirement, will still be observed, in the Civil as well as in the Military Branch. In short, though the administration of the Indian Medical Department is divided into two branches, "Indian medical officers will remain as now military officers, those in civil employ being only lent to the Civil Department, and liable to be called on for military duty in the event of their services being required." Three Civil appointments are abolished —viz., that of Superintendent-General of Vaccination, Punjaub, and the Sanitary Commissionerships for the Central Provinces and British Burmah,—but the present holders of them are to receive a personal allowance making the emoluments of their future offices equal to the pay they now draw.

When we noticed on the 6th of March last the first General Order, dated January 2, we observed that the new Civil arrangements might perhaps afford some compensation for the changes made in the Military Branch of the Indian Medical Service; but certainly no hint was afforded the Service or the public of the extent to which this suggested possible compensation would be made. It now seems certain, judging by the provisions of the two General Orders, that the Indian Medical Service, with all its lucrative civil appointments, will continue to be a highly honourable and desirable Service—to be, in fact, still the favourite Service. But it is a thousand pities that the two Orders were not issued at the same time. It is difficult, to a mind not educated to work in official fetters, to imagine why such an arrangement, which would have saved a vast amount of preventable irritation and agitation, was not made.

Perhaps, however, after all a very simple explanation of the whole matter may be the true one. Is it possible that General Order No. 2, as it is, owes its existence to the alarm and indignation aroused by General Order No. 1; and that but for the promptness and force of the opposition to it, Order the second would have borne a much greater family likeness to the first Order?

GRANULAR OR CONTRACTED KIDNEY.

Nothing struck us more forcibly in connexion with the recent discussion at the Pathological Society than the prominence given in it to French views, in contradistinction to those emanating from Germany, whence many have so long been content to draw their inspiration. And we are not sure that on this occasion a worse source whence to imbibe wisdom could have been selected. The inspiring genius of it was Charcot, and, brilliant teacher as Charcot may be, there are many subjects on which we would not greatly care to rely on his teaching, and kidney disease is one of them. Charcot's physiology is that of Ludwig; his pathology to a great measure that of Kelsch; and Kelsch's practical experience of the histology of contracted kidney was derived, at the time when his best-known paper was written—that, in fact, on which his authority mainly rests,—from *two* specimens. Moreover, we are not sure that either of them was a specimen of that kind of contracted kidney best known to us in England. We cannot here enter fully into Charcot's views; they are now available to English readers in the shape of an execrable American translation, and, notwithstanding that much which he says we know to be untrue in fact, Charcot's work will well repay careful perusal. So of Kelsch's paper; that was worked out with the greatest possible care, but is, perhaps, too much devoted to the slaying of the slain, if these extinct ideas ever existed in this country. His great aim seems to have been to demolish the views originally propounded by Reinhardt and Frerichs, that in Bright's disease there are but three stages, to one or other of which all cases belong. These, according to most German authors, were the stage of hyperæmia, exemplified by the nephritis of scarlatina; the stage of fatty degeneration of the effused products,—our large white kidney; and the third, or contracted stage, which resulted from the absorption of these fatty materials, corresponding to our small contracted kidney. Kelsch's object was to show that, as regards the contracted kidney, this pathological process began as an inflammation outside the tubules, and continued to be mainly a connective-tissue change—a view which is scarcely new on this side of the Channel.

To deal, however, again with Charcot. He says, in the American translation of his Lectures on Bright's Disease: "Before, however, describing the character of the epithelium of the convoluted tubes, I should mention that in them, as in most of the uriniferous tubes, the walls of these canals seem to be formed by an anhistous membrane, although Mr. (*sic*) Ludwig affirms that he has found in these walls evident traces of a disposition which recalls that described by M. Debove ('Mémoire sur la Couche Endothéliale Sous-épithéliale des Membranes Muqueuses') as existing in the basic membrane of certain portions of the intestine. According to it the limiting membrane of the convoluted tubes is composed of flattened cells placed in juxtaposition, whose contours are made apparent by impregnations of silver." Be it understood that the translation is not ours, though we make use of it.

It is apparently on these lines that Dr. Saundby has worked. He says: "The preparations before you exhibit the renal epithelium undergoing active changes: the protoplasm has become abnormally clear, its nuclei are swollen and contain many nucleoli, and other nuclei are dividing; many cells contain two nuclei. As a result of this process of cell-proliferation, the tubes become filled with free nuclei. . . . . In other parts of the preparations these nuclei may be seen undergoing transformation into spindle cells." The statement is certainly startling when taken by itself, for hitherto we have clung to the belief that an epithelium can develope into no tissue of a higher type; that once an epithelium always an epithelium, which might undergo various forms of degeneration, but which was not capable of being converted into any form of connective tissue. It was easy to understand that any views similar to those of Dr. Saundby would be vehemently attacked, and that strong doubts might be entertained of the correctness of his interpretations. His specimens even were called in question. But were a man saturated with views similar to those of Charcot founded on those of Debove, we do not think that such an

explanation of the origin of the spindle-cell growth in contracted kidney an out-of-the-way result of otherwise careful researches. This train of thought would seem the more likely, inasmuch as the quotation made above from Dr. Saundby's paper proceeds: "Whole areas, formerly occupied by tubules, are now occupied by rows or groups of spindle cells, while other areas in which the lesion is more advanced show nothing but wide tracts of hyaline connective tissue containing a few spindle and stellate elements." This means, if it means anything, that the tubules become not obliterated in the ordinary sense of the word, and, as is commonly believed, in a great measure destroyed by compression, but are absolutely converted into this new growth. Charcot says, again founding himself in Kelsch, that in many cases, after the *original* epithelium of the tubes has disappeared, there grow from the walls of the tubules "new cells, round or cubical, the nature of which is not well determined." That is, we take it, that it is not quite certain whether they originate from the connective tissue or from the residual layer of the epithelium—whether they are connective-tissue corpuscles or epithelial cells. "When," proceeds Charcot, "the small cells fill up the lumen of the canals, these last become difficult of recognition upon section from the embryonic tissue which surrounds them."(a)

Not the least extraordinary part of Dr. Saundby's statement is this:—"The intertubular connective tissue is widened—partly by simple swelling, partly by increased intercellular secretion, and partly, no doubt, by growth of its formative elements. But there is entire absence of any appearance of general nuclear proliferation. The capsules of the Malpighian bodies are widened by similar changes; their lining endothelium proliferates, and forms masses of granulation tissue." Well, this is certainly a departure from Kelsch and Charcot with a vengeance; but we cannot the less hold that Dr. Saundby's views are wrong, and that they will not receive the support of those best skilled in renal histology.

Another subject largely dealt with by Dr. Saundby was cyst-formation. In this, to a certain extent, he follows the views of Mr. Simon, dating many years back, and to a certain extent those also of Dr. Creighton. But he has little experience of the most fatal form of contracted kidney who expects to find these cysts always present, whilst they may exist with comparatively little macroscopic change. They constitute no essential constituent of the true contracted kidney.

Into the vexed question of the vascular changes in contracted kidney we shall not follow Dr. Saundby, as that is no essential part of his thesis. What he must stand or fall by is his doctrine of epithelial conversion into connective tissue. That the renal tubes may be thus entirely obliterated, we are hardly prepared to accept, still less that the ordinary intertubular connective tissue is only swollen and saturated with some unknown fluid in granular kidney. But we doubt not Dr. Saundby has the courage of his opinions, and is prepared to go on fighting until the battle is lost or won. That can only be done by dint of actual facts in the shape of specimens, and we sincerely hope that Dr. Saundby will not be slack in submitting new ones to competent authority. Every honest worker is entitled to his meed of praise, and though we cannot accept Dr. Saundby's views as true, we can most heartily thank him for an impulse towards the study of a dangerous and fatal disease.

(a) To this is attached a note, which, though not immediately bearing on our subject, we may give as suggestive to many of the direction of some recent work. (We again quote, though under protest, from the American edition, as it contains matter not to be found in the original French. The work of translation has been so badly done that we are ashamed to quote it except on this ground.) "This invasion of the convoluted tubes of the kidney by round or cubical cells calls to mind what occurs in the biliary capillaries in certain forms of cirrhosis of the liver, and in the walls of the alveoli or alveolar canals of the lung in certain forms of subacute or chronic broncho-pneumonia." This is probably the same thing as that meant by Dr. Saundby, only it is not made clear by either whether these tubes totally disappear or not in every instance and in this particular way.

HOWELL v. WEST AND JONES.

The case of "Howell *v.* West and another," which was concluded, on the fifth day of hearing, on Friday, the 16th inst., was one of considerable importance, not only to the defendants to the action, but to the cause of preventive measures in infectious diseases in general, and the obligatory use of isolated infirmaries in public schools. The action was brought by Mr. Howell, a medical man, who has long practised at and in the neighbourhood of Wandsworth, against Dr. De Lancey West, the Head Master of the Royal Medical Benevolent College, Epsom, and Mr. A. O'Brien Jones, the surgeon to the school. Early in February last year one of the plaintiff's sons, who was a boarder in Dr. West's house, was attacked with scarlet fever, and on February 7, as soon as the nature of his illness was apparent, he was removed by the advice of the surgeon into the school infirmary, where he unhappily died on February 14. The plaintiff contended that the defendants had caused the death of his son by their negligence, ignorance, and misconduct; but instead of making them the objects of a criminal action, he brought a civil action against them, to recover damages for an alleged breach of contract or duty. And he claimed damages only to cover certain incidental expenses, amounting to five guineas, that he had been put to in consequence of the removal of his son to the infirmary. Part of Mr. Howell's case was that there had been an express contract on the part of Dr. West that in case of the boy's illness—even from infectious fever—he should not be removed from Dr. West's house; and it was not denied that there had been a general promise made that he should be under Dr. and Mrs. West's care, and in case of illness should be treated in their own house as one of their children. Mr. Howell had formerly had three sons in the College, and had removed one of them on account of some condition of health which he had attributed to a faultiness in diet. He wished, therefore, to place his youngest son in the head master's house instead of in the College; but he admitted that he did not say that in no case was the boy to be sent to the infirmary; that in making the agreement with Dr. West he was thinking of the old infirmary, which was in the school buildings; and that he did not say anything about the new—isolated—infirmary, though he knew of the building of it. And Dr. West affirmed that nothing was said by either party as to what should be done in case of the boy, or of any of the boys, being attacked with infectious fever. That was in 1877. In 1879 the boy was taken ill, and on February 7, when Mr. Jones found that he had scarlet fever, he saw Mrs. West, and recommended the removal of the boy at once to the infirmary. He thought him very ill; his face was pallid and anxious, without rash; while the rash on his chest was of a dusky red. Mrs. West seemed surprised, and asked if Mr. Jones really thought the removal would be the best thing, to which he replied, "By all means. The room in which he now is is far too small, and, in my opinion, quite unfitted for the treatment of the case. Send him to the infirmary—he will there have the advantage of a larger, better ventilated room, and the attendance of a skilled nurse. I am only recommending what I should do if the boy were my own son." Dr. and Mrs. West then consented to the removal; and Mr. Jones went to the infirmary, and told the matron to have a fire lighted at once in the infectious ward, and to devote herself entirely to the care of the child. He was wrapped up in a blanket and taken to the infirmary in the carriage of Mr. Jones, who helped to put him to bed. We now come to another part of Mr. Howell's case. He stated that when he first saw his boy in the infirmary he

had no eruption on the face, while that on the body was of a port-wine colour. This indicated, he said, that the eruption had struck in. He was satisfied that originally the case had been a simple one; but the striking-in made it dangerous. He declared the ward was cold and damp, and that the wall was quite damp; that the temperature of the ward could not be brought up to 50°, and that there had been no fire in it for ten days until three-quarters of an hour before the boy was placed in it. He had not seen the room in Dr. West's house from which the boy had been removed. The boy's condition varied for some days, and on the 10th he "rallied wonderfully," but eventually "pyæmia supervened," and on the 14th he died; and Mr. Howell considered that "the pyæmia had resulted from the removal into the cold, damp ward of the infirmary." But a woman servant at Dr. West's house, who carried the boy downstairs and put him into Mr. Jones's carriage, and other witnesses, confirmed Mr. Jones's statement that the boy had then no rash out on his face; and the matron of the infirmary, who had been trained as a nurse at St. Thomas's Hospital, and afterwards had for some years had charge of five wards in the Highgate Infirmary, before her appointment at Epsom, stated that when the boy was placed in the ward there was no damp on the walls; that one of the boys of the College had been brought into the infirmary on January 28, and had remained there for four or five days; and that two days before Mr. Howell's son was brought in, the floors of the ward had been scrubbed and a fire had been lighted in the ward to dry them. She also stated that the temperature of the ward had been tested when Mr. Howell came, and was 55°, and she had told him that it would be 60° by the evening. Several medical men gave evidence also to the effect that, looking at the small size of the room in Dr. West's house, and the roomy and airy ward of the infirmary, Mr. Jones, in moving the poor boy when and in the way he had done, had taken the wisest course in all the circumstances of the case. Dr. James Andrew, Senior Physician of St. Bartholomew's Hospital, also entirely approved of the boy's removal. He had examined the room in Dr. West's house from which the boy was removed, and considered it a most unsuitable one for any person suffering from fever. It was only ten feet by nine in size, and could not be well ventilated.

We have now, we believe, given a fair *résumé* of the evidence on both sides; and have shown how completely and fully the removal of Mr. Howell's son to the infirmary was justified. The case was tried in the Queen's Bench Division of the High Court of Justice, before the Lord Chief Justice and a special jury. In summing up, the Lord Chief Justice characterised the action as one of the most extraordinary ever tried before him. On a charge of breach of contract, he said, the plaintiff had engrafted a charge of nothing more or less than culpable homicide, which by English law is called manslaughter. The plaintiff could not bring an action for compensation, as he had no pecuniary interest in his son's life. But he claimed the expenses to which he had been put in travelling to and from Epsom, and in employing a trained nurse—a sum amounting in the whole to five guineas; and in prosecuting that claim he had really made the charge that the defendants had by their negligence, ignorance, and misconduct caused the death of his son. For such a charge, the Lord Chief Justice said, the criminal law ought to have been resorted to, to bring punishment on the defendants for their conduct. But if the plaintiff had taken that course, and the jury found there was no real cause for such a charge, it would have assumed the character of a malicious prosecution, for which the plaintiff might have been made civilly responsible; while, in the form of action taken, he was able, without involving himself in any such consequences, to strike a blow at the defendants which, if successful, would carry professional ruin with it. His Lordship then went very fully and minutely into the evidence. He pointed out the failure of evidence to prove the express contract that was set up by the plaintiff, and asked, "Supposing no such express contract, had there been any one implied, and which Dr. West had failed to keep?" Every schoolmaster entered, beyond doubt, into an implied contract towards the parents of all his pupils, and in considering what was best for one pupil, Dr. West had also to think of what would be best for the safety of the others. The medical attendant had given a very positive opinion as to what was the best and most proper course to pursue, both for the advantage of the patient and to prevent the spread of infection, and Dr. West would have incurred the gravest responsibility if he had disregarded the advice given by Mr. Jones; he could have set it aside only at his own peril. Considering next all the evidence in the case as against Mr. Jones, his Lordship observed that "it seemed as if the grief—the passionate grief—of the plaintiff at the loss of his child had precluded him from taking a fair and candid view of the real facts of the case"; and he concluded his summing up by again remarking on the character of the action. "The plaintiff charged the defendants with nothing more nor less than having caused the death of his child. If the case, involving as it did such a painful issue, had been sued in a criminal court, it would have been treated by the counsel engaged in it in a much calmer and more dispassionate spirit. Here the learned counsel for the plaintiff had been seen exhausting all that skill and ingenuity could do to crush the defendants; and that under the pretence of getting a verdict for £5 5s. for his client."

The questions left to the jury were—as regarded Dr. West, (1) Was there an express contract entered into by Dr. West, that even in the case of infectious disorder the plaintiff's son should remain in defendant's house? (2) Was there the absence of the exercise of a reasonable and proper discretion and of due and proper care in removing the boy at all? (3) Was there absence of due and proper care in the manner of his removal; (4) or in the place to which he was removed? (5) Had the removal any injurious effect in hastening or aggravating the disease? And as regarded Mr. Jones, (1) Was there want of due skill and care in recommending the removal of the boy; (2) or in carrying out the removal, including herein the state of the ward in which he was placed; (3) or in treating the patient? (4) Had the removal any injurious effect in hastening or aggravating the disease? The jury returned a verdict in favour of both defendants, answering every one of the questions in their favour; and judgment was given accordingly. The jury took the common-sense view that an infirmary especially built to provide for prompt and effectual isolation in cases of infectious disease was meant for the use of all the boys in the school, whether residing in the College or in the head master's house; and they were satisfied that all due and proper care had been taken in all matters over which either Dr. West or Mr. Jones had any control.

Everyone will sympathise with Mr. Howell in the loss of his son—a bright, clever boy, who was a favourite with everybody,—but at the same time it is very much to be regretted that the action was ever brought; and still more that, having been commenced while sorrow was still fresh and keen, it should have been persisted in when a year had passed. And all must congratulate Dr. West and Mr. Jones on having fully vindicated their characters for humanity and good sense, and on having prevented the spread of scarlet fever in the school. They deserve great sympathy for the anxiety, worry, and expense the action must have caused them.

THE WEEK.

TOPICS OF THE DAY.

The delegates of the different vestries and other local authorities of the metropolis held a meeting last week at the St. Martin's Vestry Hall to further consider the Water Bill introduced by Mr. Cross in the late Parliament. Mr. E. J. Watherston presided, and after a lengthened discussion it was moved by Mr. Morton, representing the Wandsworth District—"That this meeting disagrees entirely with Mr. Cross's Water Bill; declares it to be entirely objectionable, and recommends that a memorial be presented to the new Home Secretary, praying the Government, when it comes into office, to withdraw the Bill." This resolution, after considerable opposition, was carried by nine votes against seven. The next resolution, which was carried unanimously, was to the effect—"That it is the opinion of this meeting that a short Bill should be introduced by the new Government at once, to bar the water companies from any increased compensation on account of the new valuation about to be made of the property of the metropolis." It was further decided to discuss the subject again on Friday, the 30th inst., before further action is taken.——At the last meeting of the Metropolitan Board of Works the subject of water-supply was also brought forward by Mr. Selway, who gave notice that at the next meeting of the Board he would move the following resolution:—"That it be referred to the Works and General Purposes Committee to consider and report as to the advisability of the Board applying to Parliament for an Act to improve the water-supply of the metropolis, either by amending and regulating the existing water companies, or by consolidating them, or by providing an additional supply of pure water, or by any other means the Committee may desire, with authority to confer with her Majesty's Government thereon." On all hands there would appear to be a desire that the subject, having now been introduced, shall not be allowed to rest until some satisfactory alterations shall have been adopted.

A death resulting from the administration of chloroform is reported from Southampton. From the evidence adduced at the inquest it appears that a gentleman, aged thirty-six, a resident of Lymington, went to Southampton, accompanied by his medical attendant, to undergo a dental operation. Having been examined and pronounced a fit subject for the administration of chloroform, he was placed under its influence, and two teeth had been extracted when it was found that he had ceased to breathe. Artificial means to restore respiration were immediately resorted to, but all efforts proved fruitless. A verdict was returned by the jury absolving the medical man and dentist from all blame.

We are sorry to learn, through an appeal put forward by the Treasurers of the Charing-cross Hospital, that the funds of that institution are in an eminently unsatisfactory condition. The annual cost of the Hospital is, we are informed, as nearly as possible £12,000, but during the past two years, presumably owing to the pressure of the times, the receipts have fallen off so considerably that the Committee find themselves in debt to the extent of £4000. The Hospital has no endowment, and as the Council have no funds to meet this large deficit, they will most reluctantly be compelled to close some of the wards unless the public come forward liberally to extricate them from their difficulties. It is needless to say that this proceeding would entail a serious amount of discomfort to the sick poor, and we sincerely trust the benevolent public will liberally respond to this most useful charity.

Although no doubt indirectly responsible for many deaths, the charlatans and quacks of the present day are not often brought to justice on a charge of wilful murder. A coroner's jury, however, at Crewkerne have recently returned that verdict in the case of a couple of herbalists, man and wife, residing at Yeovil. The deceased, a widow aged thirty-six, was proved to have visited their house, and it is alleged that while there an illegal operation was performed upon her by the two herbalists, with the object of procuring abortion. The deceased returned home in the evening very ill, and died on the following day. A post-mortem examination, made by Mr. Gatehouse (of Bath), Mr. Wills (of Crewkerne), and Dr. Galabin (of Guy's Hospital), showed that abortion had been procured before death, and that the body had been lacerated by improper interference. The jury found that the deceased came by her death through the improper use of instruments, and Dr. Wybrandts, the coroner, committed the herbalists to take their trial for wilful murder.

At the recent Kent General Sessions, held at Maidstone, a second report on the subject of drunkenness was presented by the Committee appointed to consider the matter. The report expressed an opinion that much mischief had resulted from the facilities afforded for obtaining spirits through grocers' licences, and recommended that the sale of spirits in that manner should be greatly restricted, if not altogether prohibited. As regarded adulteration, they thought there could be no doubt that further legislation was required with respect to beer. The difficulty now principally consisted in the want of a proper standard for analysis, and in the fact that the employment of ingredients other than malt and hops is by law permitted. The Committee asserted that a scientific inquiry into the adulteration of beer was absolutely required, for they had reason to believe that if the beer of this country were brewed solely from malt and hops the amount of drunkenness would be very sensibly diminished. They recommended that it should be illegal for a lunatic to be served with alcoholic drinks, and hoped that the recent legislation for the custody and recovery of habitual drunkards and dipsomaniacs would no longer be allowed to remain a dead letter. The report also spoke with pleasure of the establishment of workmen's clubs and coffee-taverns, which they believed would tend to lessen the evils of drunkenness.

On Saturday night last, at the City Terminus Hotel, a large number of delegates from various friendly societies and representatives of different London hospitals assembled to consider a scheme which had been deliberated on by a provisional committee appointed nearly a year ago. It was stated (of course the statement is *de rigueur* on all these occasions) that at least one-fourth of the population of London received gratuitous medical treatment, and that this was necessarily of a very imperfect kind; and to remedy this evil it was proposed that persons of every class who were intermediate between those who could pay ordinary professional fees, and paupers, should become members of local associations on a co-operative mutual assurance principle, whereby they could obtain advantages similar to those possessed by the rich. Mr. James Stansfeld, M.P., took the chair, and, in moving the adoption of the report, explained the objects sought to be attained. He asked the friendly societies to contribute to these objects, and, by the employment of their organising faculty and experience, to aid in extending to others the benefits which they had not yet enjoyed. The report was carried unanimously, and it was resolved to form a council for the purpose of commencing proceedings forthwith.

At the usual meeting of the Metropolitan Asylums Board, held on Saturday last, amongst other business Sir E. H. Currie brought forward the annual report of the Darenth

Imbecile Asylum, which contained much valuable information, and showed that as the imbecile children are subjected to training in this institution the conditions of their maladies are changed, and that the proportion of cures is increasing. The reports from the Board's hospitals showed that at the Stockwell Fever Asylum during the previous fortnight 28 cases had been admitted, 5 had died, and 33 had been discharged, leaving 102 cases under treatment, of which 98 were suffering from scarlet fever, 1 from typhus, and 3 from enteric fever. At the Homerton Fever Hospital 27 had been admitted, 2 had died, and 32 had been discharged, leaving 80 scarlet fever cases and 23 cases of enteric fever under treatment. At the Deptford Asylum 11 fresh cases had been admitted, 3 had died, and 7 had been discharged, leaving 52 cases of scarlet fever, 2 of typhus, and 17 of enteric fever under treatment. In all, there were 276 patients under treatment, as against 298 a fortnight ago—a decrease of 22. The small-pox returns showed that during the fortnight 38 cases had been admitted to Homerton Asylum, 11 to Stockwell Asylum, 5 to Fulham Asylum, and 26 to Deptford Asylum—in all 80; whilst the total mortality was 11, and the total discharges 58, leaving 18 under treatment, an increase on the whole of 11 as compared with the previous fortnight.

Last week, in the unavoidable absence of the Lord Mayor, Mr. Sheriff Woolston opened a coffee-palace at 12, Finsbury-place, which is the tenth opened in the metropolis by the London and Provincial Coffee Palace Company (Limited). In addition to refreshment-rooms this palace contains twenty-three bedrooms for respectable men, and it was stated that the experiment of supplying beds for the accommodation of hard-working men had succeeded admirably.

The ratepayers of the Holborn District, after a further lengthened period of inactivity, have made another attempt to induce the Metropolitan Board of Works to proceed with the Gray's-inn-road improvement scheme. At a meeting held last week in the Holborn Town Hall, under the presidency of Mr. W. McC. Torrens, M.P., it was moved and seconded—"That this meeting calls the attention of the Metropolitan Board of Works to the fact of their having obtained power by the Act of 1877 for the widening of Gray's-inn-road; and represents to the Board that the partial demolition of houses during the past two years, and the great delay in carrying out the proposed improvements, are causing serious loss to the tradesmen and ratepayers. It therefore urges on the Board the necessity of completing this undertaking without further delay." The chairman remarked that the patience of Holborn was exhausted, and they were no longer justified in remaining passive spectators of the present dead-lock. After fifteen years' experience of the working of the Metropolitan Board of Works, he was convinced that that body had too much to do, and could not give sufficient time to the various details of business brought before it. If he were to take charge of any scheme of legislation, he asked the meeting to consider whether it was not advisable that the power of doing what was necessary should devolve upon the different localities, instead of the whole burden being thrown on the Metropolitan Board of Works. The Board was not doing the work, and, in his opinion, never would do it. The Rev. A. H. Maconochie moved—"That this meeting is furthermore of opinion that the unsanitary condition of the remaining portion of the district scheduled in the before-mentioned scheme justifies the gravest anxiety and demands the immediate consideration of the Board." He gave a deplorable account of the wholesale overcrowding which had come under his personal notice in the district. Dr. Hardwicke, the coroner, also bore testimony to the unsanitary overcrowding of the neighbourhood, and showed that the death-rate in the lower lodgings was generally forty in the thousand, or double what it ought to be. It was eventually resolved that a deputation should wait on the Metropolitan Board of Works with copies of the resolutions passed.

THE ROYAL IRISH UNIVERSITY.

On Monday, April 19, her Majesty the Queen affixed her sign-manual to the charter of this new University. The Chancellor is to be his Grace the Duke of Abercorn, K.G., and the following will comprise the Senate:—The Most Rev. R. Chenevix Trench, D.D., Archbishop of Dublin; the Most Rev. Archbishop Edward MacCabe, D.D.; the Right Hon. John Thomas Ball, Lord Chancellor of Ireland; the Earl of Granard, K.P.; Earl of Kenmare, K.P.; Earl of Rosse; Most Rev. Lord Plunket; Right Rev. Bishop Woodlock, D.D.; Right Hon. Lord O'Hagan; Right Hon. Lord Emly; Right Hon. the Lord Chief Justice Morris; Right Hon. Mr. Justice Barry; Sir Robert Kane, Knt.; Very Rev. H. F. Neville, D.D.; Very Rev. James B. Kavanagh, D.D.; Rev. J. L. Porter, D.D., W. K. Sullivan, Ph.D., Thomas Wm. Moffett, LL.D., Presidents of the Queen's Colleges; Rev. Robinson Scott, D.D.; Rev. Gerald Molloy, D.D.; George J. Allman, LL.D.; John T. Banks, M.D., Physician-in-Ordinary to the Queen in Ireland; F. R. Cruise, M.D.; Thomas Hayden, F.K.Q.C.P.; R. D. Lyons, F.K.Q.C.P.; A. Macalister, M.D.; W. A. McKeown, M.D.; Peter Redfern, M.D.; Rev. W. S. Stevenson; Edmund Dease, Esq.; Arthur Kavanagh, Esq.; James Greer, Esq.; Christopher T. Redington, Esq.; Robert Scott, Esq.; Edward D. J. Wilson, Esq.; John Young, Esq. Judging from this list the Government have desired to make the Senate thoroughly representative, both as regards religious denominations and the various professional and educational interests. It is the best and most likely way of exciting in the public a general confidence as to the impartiality and efficiency of the governing body of the new University.

A CASE OF HYPERPYREXIA.

A young woman, aged twenty-three years, was admitted to the Adelaide Hospital, Dublin, some ten or twelve days ago, under the care of Dr. James Little, suffering from cerebro-spinal symptoms, probably attributable to a fall on the back of the head a few days previously. At first the recorded temperatures presented no peculiarity, but at the end of last week the variations of temperature became remarkable for their extent and suddenness. At 9 p.m. on Monday, April 19, the axillary temperature recorded by a certified registering thermometer was 115° Fahr. A rapid but partial defervescence followed, but at 5 a.m. of the 20th the thermometer had again risen to the same astonishing figure. A few hours later it fell to 99·4°. The bursts of hyperpyrexia are ushered in by severe pain in the head, and pass away with profuse diaphoresis. This remarkable case will no doubt be recorded in detail by Dr. Little when it has terminated—we hope, in the patient's recovery.

DR. BALLARD'S REPORT ON THE SANITARY CONDITION OF NEW QUAY.

The report furnished by Dr. Ballard to the Local Government Board, on the sanitary condition of the Urban Sanitary District of New Quay, in Cornwall, illustrates the risks which have to be run by those who leave their homes for the purpose of seeking a fresh instalment of health at the seaside. An outbreak of enteric fever at Tolcarne Head, New Quay, in 1879, having been reported to the Board in London by the resident Medical Officer of Health, Dr. Ballard, who

was spending his vaeation at New Quay at the time, was instrueted to institute an inquiry into its eause, and he proceeded to make a thorough investigation. His report oeeupies no less than eighteen pages, but want of spaee will only admit of our glaneing at the prominent points. We should premise that New Quay has a bad sanitary reputation : about twenty years ago it was visited by a very severe and fatal epidemie of enterie fever, and since that time the disease has never been altogether absent; while in 1874, in eonsequence of a communieation made by Sir James Paget, Dr. Blaxall was despatehed to the loeality to make inquiries. He reported having seen twenty or thirty eases of various degrees of severity, and he observed "that the distribution of the fever eoineided in a remarkable manner with the ramifications of a sewer." Summing up his report, Dr. Blaxall wrote—"Taking into eonsideration all the eircumstanees, I am of opinion that the main eause of the outbreak of fever was a polluted atmosphere, occasioned by the eseape of sewer-air in the immediate vieinity of the dwellings, and, in some instanees, into the dwellings themselves." On the present oeeasion Dr. Ballard found that any suspieion of conveyanee of the fever through milk-supply was out of the question, whilst the dwellings oeeupied by the labouring elasses were elean and tidy, and contrasted most favourably in these respects with houses of a similar elass in various parts of the Midland Counties. Prior to 1876 there was no proper system of sewers in New Quay, but in 1878 a system of pipe-sewering was introdueed, and this work, Dr. Ballard affirms, was done in a slovenly and imperfeet manner. The outbreak of the fever in 1879 was almost exelusively eonfined to inmates of houses recently eonstructed at Tolearne Head. In April, 1878, the Local Board applied to the Local Government Board on the subjeet of the drainage of these houses, and certain advice was given by the London authorities; but, on examination, Dr. Ballard found that the work had been exeeuted in direet eontravention of the adviee tendered, and as there was ample evidenee of opportunities of eonveyance of eontagium, both through foul air and water-supply polluted through soakage of exeremental matter into the wells in use in the locality, the origin of the outbreak was not involved in much obseurity. Dr. Ballard eoneludes his report by remarking that there is scarcely even a pretenee of ordinary sanitary administration made by the Loeal Board of New Quay, assuming this to mean the speedy and regular removal from the distriet of things whieh the law regards as nuisanees, the enforcement of the Board's own sanitary by-laws, and the adoption of those means whieh the Legislature has enabled sanitary authorities to adopt for the prevention and arrest of spreading diseases. The medieal officer of health was only appointed in June last year, and his salary is £10 per annum. The surveyor to the Board has no teehnieal edueation, and receives £4 per annum; whilst the inspeetor of nuisanees is a stonemason by trade, who draws a salary exactly equal to that paid to the medieal offieer, and notoriously negleets his work. When sueh a state of affairs is taken into consideration it would not seem diffieult to predict that Dr. Ballard's "reeommendations," and the result of his exhaustive investigations, will alike be thrown away upon a Loeal Sanitary Authority which is sanitary only in name.

ELECTION OF CORONER FOR THE WESTERN DIVISION OF KENT.

Dr. Theodore Maxwell is, we are glad to observe, a eandidate for the office of coroner, vacated by the death of Mr. Carttar. Dr. Maxwell has unusually strong elaims on the freeholders of the distriet. He is M.D. and B.A. of King's College, Cambridge; Baehelor of Scienee, of London; Fellow of the Royal College of Surgeons of Edinburgh; and Fellow of the Chemieal Soeiety. He gained the gold medal for ehemistry in University College, and graduated with honours in natural seience both in Cambridge and London. And he studied in Vienna; and has been in practiee some years. He ought to be strongly supported. The polling for the appointment will take plaee at Greenwieh on Thursday, April 29, from 8 a.m. till 4 p.m.

THE REGISTRAR-GENERAL'S DEPARTMENT.

Dr. William Ogle, Medieal Offieer of Health for part of Hertfordshire, has been appointed Superintendent of Statistics in the Registrar-General's Department, in plaee of Dr. William Farr, C.B., resigned. Dr. Ogle is well known and recognised as a physician of high abilities and large edueation. He has for some years served as the Medical Officer of Health to an extensive and important rural sanitary district, and has been employed by the Medical Department of the Loeal Government to make investigations and to report regarding some speeial outbreaks of infeetious disease. We have no doubt that his appointment to his new office will give general satisfaetion.

NAVAL MEDICAL COMPASSIONATE FUND.

At the quarterly meeting of the Naval Medical Compassionate Fund, held on the 13th instant, Dr. H. J. Domville, C.B., Inspeetor-General, in the ehair, the sum of £70 was distributed among the various elaimants.

THE HEALTH OF BIRMINGHAM.

The earefully eompiled quarterly reports of Dr. Alfred Hill, the Medieal Offieer of Health for the borough of Birmingham, show that during the last half of the year 1879 the health of that town exhibited a eonsiderable improvement. To those who are acquainted with its peculiarly smoky atmosphere and enormous industries it will appear surprising that the death-rate for the third quarter of the past year was only equal to an annual rate of 16·35 per 1000 of the population, while the mortality for the fourth quarter was at the rate of 22·64 per 1000 of the population, as eompared with rates of 24·21 and 27·08 in the autumn quarters of 1877 and 1878 respeetively. This considerable fall in the mortality on the fourth quarters of the two previous years is, Dr. Hill remarks, entirely due to a diminution in the mortality from zymotie diseases, more espeeially scarlet fever. In the autumn quarter of last year the epidemie of scarlet fever was at its height, and was aecountable for 17 per eent. of the deaths from all eauses. In both quarters bronehitis and diseases of the respiratory organs were more fatal than in the eorresponding quarters of the previous year, entirely due to the eomparatively low temperature and exeessive amount of moisture which prevailed during the whole period. The average age at death during the third quarter of 1879 was twenty-four years and eleven months, against seventeen years and eight months in the summer quarter of 1878. This large difference is ehiefly due to the diminished mortality from infantile diarrhœa. In the fourth quarter of 1879 the average age at death was twenty-two years and ten months, as eompared with twenty-three years and three months in the corresponding quarter of the previous year.

SURGEON-MAJOR SIR SAMUEL ROWE, K.C.M.G., M.B.

Her Majesty has been graciously pleased to appoint Surg.-Major Samuel Rowe, C.M.G., M.B., C.M., M.R.C.S. Eng., Governor of her Majesty's West African Settlements, to be a Knight Commander of the Most Distinguished Order of St. Michael and St. George.

UNIVERSITY OF GLASGOW.

Dr. Charteris has, we believe, been appointed Professor of Materia Medica in the University of Glasgow, the former Professor, Dr. Cowan, having resigned on account of ill-health.

The Vice-Chancellor of the University of Cambridge has appointed Professor Murray Humphry, M.D., F.R.S., to the office of Sir Robert Rede's Lecturer for the ensuing year.

THE THREATENED DISFRANCHISEMENT OF THE SCOTTISH UNIVERSITIES.

Few Scottish graduates will read without a feeling of indignation the following extracts taken from the *Times*. They constitute the backbone of the speeches made by Dr. Lyon Playfair on the occasion of his being declared member of Parliament for the Universities of St. Andrews and Edinburgh, and by Mr. Campbell Swinton, who has been the chief agent in the Conservative cause:—"Now, I," says Dr. Playfair, "wish to point out that a contest without a strong academic element in it is a matter of extreme danger to the representation of the Scottish Universities. A large section of the Liberals at the present moment doubt the wisdom of University representation at all; and it is unquestionable that, upon a redistribution of seats, which must soon follow upon a Reform Bill, all the University seats must stand upon their defence. The old University seats of Oxford and Cambridge may possibly survive that defence; and I hope the Scotch University seats will also survive it. But my own impression is that they are in far greater danger than the old University seats of Oxford and Cambridge; and I will tell you why. There is a very strong feeling existing among both political parties in the House of Commons that our Scotch University seats are used more largely as mere political seats than as academic seats. But there is a still stronger reason; and if those who hear me and those to whom my words are reported only heard the strength of the language used, they would see the danger to the representation of these Universities. It is said that the expense attending Scotch University elections is 'perfectly scandalous.' An English University seat, when contested, costs a few hundred pounds at most; but a short contest in a Scotch University seat costs some thousands. Now, this is considered a great scandal, and it is one of the greatest dangers to University representation in the future. In conducting this contest I can say, without affectation and with perfect truth, that I have been far less anxious in regard to my own personal success than to the interests of the Universities. I have felt that the contest should be conducted in such a manner that it should have an academic character, and I have based whatever claims I may have upon the constituency upon academic grounds, and not upon any political position I might have. I also tried to lessen the danger of a political contest in another way. I tried to show that the University seat might be won by an expenditure not exceeding that which was found sufficient in English Universities. It would have been perfectly impossible for me to attain this end had I not received a large amount of generous support from my committee. No man ever had a more efficient and zealous unpaid organisation than I have had in different parts of the country; and if it had not been for this wonderful amount of volunteer and unpaid organisation it would have been perfectly impossible for me to have carried out what I most earnestly desired in order to show that a University seat might be won with but little expenditure of money." Mr. A. Campbell Swinton said that "he would not follow his right hon. friend into the disquisition with which he had favoured them as to the especial position of the University representation, or as to the views of either party in the State upon the desirability of continuing the representation of the Scottish Universities, further than to express his deep regret at the statement which he had heard to-day for the first time, that among the party of which his right hon. friend was so distinguished an ornament there was any likelihood of a movement to deprive them of such representation. He did not know that an argument of that kind—and he now for the first time heard that any such view existed among a large party in the country—would have made those on his side less determined than they were to support the views of the opposite party in the State. He would say no more except to congratulate his right hon. friend on the success which had attended his candidature—a success which he thought he had the greater reason to be proud of because, as he well knew, it was a triumph to himself, and not to his party. He was a little surprised that in the enumeration which he made of the various circumstances which attended this contest he did not mention the large support which he had received, and which, no doubt, he was proud of, from the members of the Conservative party. No doubt he felt that, and on another occasion would express it. He might add that, while justifying the opposition, it only increased his personal respect for his right hon. friend, inasmuch as it must be to a considerable degree acknowledged that it was his personal qualities that had gained for him that support." Dr. Lyon Playfair: "Allow me to explain with reference to the views held by some regarding the University representation. I did not say that it was the opinion of the Liberal party as a whole, but that it was the opinion of the advanced section of the Liberal party."

This, then, is not the solitary opinion of Dr. Lyon Playfair, but of the advanced section of the Liberal party. Were the words the words of Dr Lyon Playfair alone, we could afford to pass them by. But, for the first time, we believe, in the history of a constituency, or we might say of constitutional history, men are threatened with disfranchisement because they have used their votes for political purposes. We have heard of bribery and intimidation elsewhere, but there is no such suspicion here. The allegation is that the seat costs too much money.

Dr. Playfair says that in such contests there should be something "academic." Do Dr. Playfair and his friends who threaten thus to disfranchise every Scottish graduate embody in themselves the essence of all academic virtue, and softly suggest that their opponents possess none? Such language from such a source is most unbecoming, seeing that, as Dr. Playfair well knows, he owes his seat to Conservative votes. Dr. Playfair says the seats should not be political; let him set the example, and decline all office in the next Government. If he does accept, his words may perchance produce bitter fruit.

The French Medical Association.—This body held its twenty-second annual meeting on the 4th inst., under the presidency of M. Roger. The report of M. Brun, who has officiated as its treasurer (as M. Amédée Latour has as its secretary) since its foundation, shows that it is in a flourishing condition. It now has a capital of almost 1,500,000 fr., and has since its foundation expended more than 500,000 fr. in furnishing succour to unfortunate members of the profession or their relatives. Since 1874, aided by generous gifts, it has established several pensioners for life, having accumulated a capital of 605,000 fr. for that purpose. A banquet was given at the Hôtel Continental in the evening.—*Union Méd.*, April 13.

THE INDIAN MEDICAL DEPARTMENT: CIVIL BRANCH.

The following notification, dated Fort William, March 15, 1880, has been issued for the regulation of the Civil Branch of the Indian Medical Service :—

In continuation of G. O. No. 13, dated January 2, 1880, issued in the Military Department, and subject to such modifications as may hereafter be deemed necessary, the Governor-General in Council is pleased, with the sanction of her Majesty's Secretary of State, to issue the following orders regarding the administrative staff of the Indian Medical Department in the several provinces of India.

2. From March 31, 1880, the following administrative appointments will be made :

	Monthly salary. Rs.
1 Surgeon-General with the Government of India ..	2700
1 Deputy Surgeon-General, with local rank of Surgeon-General, for civil medical administration in Bengal	2250
1 Deputy Surgeon-General, with local rank of Surgeon-General in the North-Western Provinces and Oudh	2250
1 Deputy Surgeon-General with local rank of Surgeon-General in the Punjab	1800
1 Deputy Surgeon-General for civil medical administration in the Central Provinces	1800
1 Surgeon-General for civil medical administration in Madras	2500
1 Secretary to the Surgeon-General, Madras	*800
1 Surgeon-General for civil medical administration in Bombay	2500
1 Secretary to the Surgeon-General, Bombay	*800

* Consolidated.

3. The Surgeons-General with the Government of India and with the Governments of Madras and Bombay will, in addition to performing civil administrative duties, be heads of the Indian Medical Departments in their respective presidencies. It will be their duty, among other matters, to propose transfers between the Military and Civil Departments; to recommend for promotion to the administrative grades; and to advise the Government on all questions relating to the admission of officers and subordinates to the Indian Service, to the conduct and services of Indian medical officers of all grades, and to the supply of medicines and hospital stores. The Surgeon-General with the Government of India will be entitled to receive any information he desires from the Surgeons-General and Deputy Surgeons-General attached to the local governments and administrations; but he will exercise no direct authority over them. These officers will be solely under the orders of the local government or administration to which each belongs.

4. Officers will be selected for the above-named administrative offices by the Government of India for the Bengal Presidency, and by the Governments of Madras and Bombay for those Presidencies respectively. Selections will be made in each presidency from the whole Indian Medical Service of that Presidency; and the principles of selection, hitherto followed in making such appointments, will be observed. Surgeons-General and all Deputy Surgeons-General, including those who may have the local rank of Surgeon-General, will count their five years' term of office from the date of their first entering on the duties of their rank, whether in the military or civil branch of the Service.

5. The Deputy Surgeon-General for the Central Provinces will also be Sanitary Commissioner for those provinces. As already notified in the Military Department Order above quoted, "the Deputy Surgeons-General of the Eastern Frontier District and of the British Burma Division will, in addition to their military duties, exercise the civil medical administration of their respective provinces, and will also perform the duties of Sanitary Commissioners in them." The Deputy Surgeons-General of the Punjab Field Force and of the Sind District will also exercise the civil medical administration of those circles. In respect of these civil duties they will be subject to the orders of the Provincial Surgeon-General.

6. In all provinces, for which a separate Sanitary Commissioner is sanctioned, the Sanitary Department will remain distinct from, and not subordinate to, the Medical Department. The Sanitary Commissioner of Madras and of Bombay will, in future, have the rank and privileges of a Deputy Surgeon-General, as soon as he attains twenty-six years' service, or as soon as any officer below him on the list is promoted to the administrative grade; and, subject to the same conditions and limitations, the Sanitary Commissioner of Bengal, the North-Western Provinces, and the Punjab will have the rank, pay, and privileges of a Deputy Surgeon-General. This rule will apply to officers now holding the appointment of Sanitary Commissioner in these provinces. The five years' tenure of office by a Sanitary Commissioner in each province will reckon from the date of his attaining the rank and privileges of a Deputy Surgeon-General. In the appointment of officers to be Sanitary Commissioners the same principles and procedure will be adopted as in the promotion to Deputy Surgeon-General in the military and civil administration; but in the selection for such posts, knowledge and experience as a sanitary officer will be specially considered.

7. The supervision of the Vaccination Department will form an important part of the duties of the Sanitary Commissioner in each province. The separate appointment of Superintendent-General of Vaccination, where it still exists, will be abolished, and this officer as well as the Superintendents of Vaccination will become a Deputy Sanitary Commissioner under the orders of the Sanitary Commissioner, who will utilise not only them, but also the whole vaccination staff and the Civil Surgeons as far as possible in sanitary work.

8. Although the administration of the Indian Medical Department is divided into two branches—civil and military—Indian medical officers will remain as now military officers, those in civil employ being only lent to the Civil Department, and liable to be called on for military duty in the event of their services being required.

9. Officers holding appointments which are abolished under these orders—viz., the Superintendent-General of Vaccination, Punjab, and the Sanitary Commissioners for the Central Provinces and British Burma, will receive a personal allowance, making the emoluments of their future offices equal to the pay they now draw.

C. Bernard,
Offg. Secretary to the Govt. of India.

FROM ABROAD.

Bromide of Ethyl as an Anæsthetic.

The employment of this substance has been the subject of some interesting communications in the American medical journals. Originally employed by the late Mr. Nunneley, of Leeds, who in 1865 communicated to the British Medical Association the satisfactory results he had obtained, it failed to attract general attention. In 1877, Dr. Turnbull, of Philadelphia, began experimenting with it, without being aware of what Mr. Nunneley had already done, and communicated the results of the successful trials he had made of it—chiefly in short operations on the eye and ear—to the British Medical Association and the Amsterdam Medical Congress in 1879. In that year, also, Dr. Levis, surgeon to two large general hospitals in Philadelphia, commenced his trials with it in general surgery and prolonged operations, and has since became the most prominent advocate for its employment. This gentleman furnishes, in the *New York Medical Record* for March 27, a summary of the deductions derivable from his entire experience in the use of this agent.

Decided characteristics of the administration of bromide of ethyl, or, as it is also called, hydrobromic ether, are the rapidity of its action and quickness of recovery from its effects. The longest period required for the induction of anæsthesia in the adult has not exceeded five minutes, and recovery sometimes takes place as quickly as after the use of the nitrous oxide, the patient speedily returning to his normal condition, and being less liable to vomiting or nausea than after chloroform or ether. For the administration of the bromide, Dr. Levis, objecting to all forms of apparatus, pours two or three drachms on several folds of woven lint, or on a small soft linen handkerchief, over which is pinned a napkin folded large enough to cover the entire face—anæsthesia being, in his experience, more quickly obtained, without excitement, if light be excluded and the temptation to look about prevented. In commencing the inhalation,

a rapid and decided impression should be made with the lint and napkin held close over the nose and mouth, the object being to attain anæsthesia without the intervention of mental and muscular excitement, enough air gaining access through the napkin to prevent danger from asphyxia. "In my experience, the entire quantity of ethyl consumed in effecting and continuing anæsthesia in any single case has varied from one fluid drachm, used in a very brief period, to eleven drachms required in maintaining anæsthesia through an operation of forty minutes' duration." Dr. Levis regards it of importance, prior to commencing the inhalation, to cause the patient to make for a time numerous deep expirations, so as to expel the residuary air. While thus breathing deeply, the inhalations should be commenced, and until complete anæsthesia is produced there should not be a moment allowed to pass without the vapour being inhaled, this being replenished as it becomes exhausted. The best indication of the sufficiency of the anæsthesia is the change in the breathing of the patient to that of ordinary deep sleep; and when the anæsthesia becomes profound there may be more or less snoring or a puffing sound, due to relaxation of the palatine and buccal muscles. This condition present, the administration should cease or be very moderately continued. "I cannot too much impress the greater importance of observation and reliance on the state of the respiration, rather than of the circulation, as an index of the condition of the ethylised patient." No fatal case had occurred when Dr. Levis wrote, among the now large number of administrations, nor had any dangerous or threatening symptoms as yet been observed. The action of the bromide is neither insidious nor uncertain; but, judging from the careless and bungling manner in which other anæsthetics are sometimes administered, it is only to be expected that this agreeable and unirritating agent will be employed ignorantly and inordinately, giving rise to dangerous symptoms, or even death itself. "I have used," Dr. Levis observes in conclusion, "the bromide of ethyl in the surgery of two large hospitals, and in private surgical practice, under the most varied circumstances which could be required to test the merits of an anæsthetic. In my use of it in the most abnormal conditions of debility and shock from injury, in capital operations, through protracted periods of administration, in patients from early infancy to extreme old age, it has always been satisfactory and free from manifestations of danger. I express my conviction that it is practically the best anæsthetic known to the profession."

A communication from Dr. Marion Sims in the next number (April 3) of the *Medical Record*, which was read before the New York Academy of Medicine, shows that this eulogium of the bromide must be accepted with some reservation. It consists in the narration of a case of Battey's operation, performed, under the use of the bromide, upon a maiden lady twenty-five years of age who had been the subject of epilepsy during the last five years. The operation lasted an hour and a half, pure bromide of ethyl, made by Wyeth, and like that employed by Dr. Levis, being used. From four and a half to five ounces of this was consumed. During the whole time the patient's condition was good, her pulse being strong and full. The breathing, however, was rapid and short, and the eyeballs were in constant motion. On three occasions there was also considerable opisthotonos, with twitching and rigidity of the extremities—appearances similar to those observed during one of the patient's epileptic attacks. She recovered rapidly from the anæsthesia, but was attacked by most violent retching and vomiting, which after some hours was followed by diarrhœa. She died twenty-one hours after the operation had been performed, only five ounces one drachm of urine having been removed by catheterism during this period. To all appearances she had died from exhaustion, supposed to be due to slow internal hæmorrhage caused by the displacement of some of the pedicle ligatures through the violent efforts caused by vomiting. At the post-mortem this was proved not to be the case, and Dr. Sims, after an analytical review of the symptoms, comes to the conclusion that the anæsthetic was the cause of death; "while the manner of death may have been by uræmic poisoning." He has seen two cases also of death from etherisation in which the secretion of urine was almost instantly arrested. In this case the kidneys seemed to be healthy, but the microscope showed some increase of connective interstitial tissue. The operation lasted a far longer time than it did in any of Dr. Levis's cases, and an enormous amount of the bromide was employed. The choleraic diarrhœa which occurred had doubtless an important bearing on the result; but this was only produced secondarily, the bowels aiding here the lungs in eliminating the poison, the action of the kidneys being arrested. Contrary to what Dr. Levis has observed, the ethyl odour was in this case most abiding after the operation, being found powerful even during the post-mortem, performed twenty-one hours after death, the solids and fluids having become by the prolongation of the operation so supersaturated with the ethyl that it could not be eliminated. The conclusion that Dr. Sims arrives at is, that the bromide should not be used in long operations or where disease of the kidney exists.

At the discussion which followed the reading of this paper, Dr. Levis observed that some explanation might be obtained in this case from what he had himself found on commencing his experiments with the bromide, viz., that he proceeded too slowly. He now knew that the proper method was to make a rapid impression, as is done in giving the nitrous oxide; and he was nearly always able to induce complete anæsthesia by the use of two drachms in two or three minutes. He was struck by the large quantity used in Dr. Sims' case, as in none of his own cases had more than eleven drachms been required for operations lasting more than forty minutes. Dr. Roberts, of Philadelphia, stated that he had used the bromide on many occasions, and one of the chief benefits arising from substituting it for ether was that it affected the respiration but little, except, to a certain extent, to increase its frequency. In no case had he seen the hypersecretion of mucus, which is so annoying in etherisation. As a rule, the patient had come from under its influence very promptly. He believed it possible that in Dr. Sims' case sufficient stress had not been laid upon the operation as a factor in producing the death, as some deaths had followed the abdominal incision for Battey's operation.

The Medical Profession in England and America.

Dr. Fothergill, who contributes what is called the "London Letter" to the *Philadelphia Medical Times*, having in one of these represented the position of the wives and families of the country practitioners of this country in a somewhat damaging light as regarded their social position—employing the offensive term "pariah" as characterising it,—his exaggerated statements called forth many remarks and contradictions in the columns of a contemporary; but our only object in noticing them is to quote the observations of the Editor of the *Philadelphia Medical Times*, Prof. Horatio Wood, the author of the well-known work on Therapeutics, in an article "On the Comparative Influence of the Profession in England and America." He commences with the rather curious position that Dr. Fothergill's statements must be exact, or they would never have called forth so great an amount of contradiction—a doctrine which would prevent an aspersion ever being effectually replied to. Prof. Wood states that during a recent visit to London he found the profession here, as he expected to do, unsurpassed in culture, practical skill, and gentlemanliness.

"Nevertheless, there was left an impression, as deep as it was unexpected, that the social position and the influence of the medical profession in England are much below what they are in this country. The first physician met with was a well-known man—the medical attendant of some of the most exalted persons in the realm—who immediately began to talk about the profession. 'We doctors! why, we are the very scum of the earth! If we attend my lord to-night, it is not to be expected that to-morrow he would know us in the street. We are only a sort of body-servants after all.' Of course this was talk, but it was talk which welled out of a bitter fountain within. Another most surprising thing was the tone of awe in which the treasurer of the hospital was spoken of by the medical staff, as well as the evident joy occasioned by an invitation to his garden-party. Here, every doctor under forty years of age in a hospital staff feels himself a little above his hospital manager; after forty, however, he is apt to value men of business as his equals.

"It is hardly necessary to multiply such personal experience in order to show the difference in the position of the profession in the two countries. The contrast is plain in the results of effort. Whenever the American medical profession really determines to accomplish any reform within its province, to obtain proper government aid for

any project, or to combat any attack upon its privileges, it is, so far as our experience leads, universally successful. The English profession is much better organised than is the American, but it seems very often to fail in its utmost endeavour. The anti-vivisection agitation shows plainly the difference. We all know the amount of effort put forth by the English profession to prevent the passage of the Vivisection Act, and the result. In our own State an effort no less determined than the English agitation was made by a well-organised popular society to secure oppressive legislation; but it was hopelessly beaten by two physicians who were empowered to present themselves as the representatives of a single local Philadelphia medical society. Scarcely a tithe of the power of the profession was put forth. It cannot be said that our legislators are wiser, our people more sensible, than those of their own race in the mother-country, but simply that the profession has more influence and power here than in England.

"The causes of the status of the medical profession being lower in Great Britain than in America are not difficult to discover. It must be remembered that social rank is a matter of relation, and that in England there is a large class of people artificially set apart as superior to their fellow-men, and mostly supported in great affluence by hereditary fortunes. Another relic of mediæval barbarism that still holds sway in the mother-country, with a force almost inconceivable in this land of new ideas, is the powerful effect of broad acres in exalting their fortunate possessors. Most of the English nobility have large landed possessions, and hence in a twofold way command the respect of their less fortunate brother Englishmen. For a doctor to attain to the lower ranks of the nobility is not unknown; but knighthood may be conferred on a fortunate provincial mayor who receives her Majesty in some town of the country districts, and very rarely indeed is the doctor able to boast of sufficient estates to rival even the country squire. Medical men are at the apex in this country, because we have no privileged noble class sustained by that deference for artificial rank which has been ingrained in the [English character by the training of successive generations. The reasons assigned do not, however, account for the fact that, whilst in this country the medical profession is at least as powerful as the legal and clerical, in England its influence bears no comparison with that of its sister professions. The explanation of this anomaly is to be found in the relations of the professions to the Government in the two countries. The seat of the Bishops in the House of Lords is assured, whilst every young, ambitious lawyer may hope some day to sit as a peer of the realm. Until there are medical lords, who have a right to speak on the floor of the House of Lords, and who shall exert an influence in the decision of all questions of State medicine comparable to that of the law-lords in legal questions, the medical profession in Great Britain cannot expect to control the Governmental action as we are able to do in America, or to be recognised by the mass of Englishmen as entirely the peers of members of the other professions."

Tonic Glycerine.—For patients who cannot take cod-liver oil, Dr. Larmaude finds what he calls "tonic glycerine" an excellent substitute: pure glycerine 300 grammes, tincture of iodine 30 drops, iodide of potassium 30 centigrammes. A tablespoonful a quarter of an hour before each meal. The appetite soon returns, and constipation, when present, soon disappears. For children and delicate persons he employs 50 grammes of syrup of raspberries and 250 of glycerine. —*Rev. Méd.*, April 3.

A Curious Termination of an Action for Malpraxis.—In the *Medical and Surgical Reporter* we read that two Baltimore physicians were sued for alleged malpraxis in the treatment of a fracture of the arm, damages $10,000. One of them explained the nature of the case and the treatment employed so clearly that at the conclusion of his testimony the counsel for plaintiff said, "The plaintiff takes pleasure, as does his counsel, in saying that this suit was brought under a misapprehension of the facts, and that he is so impressed with the doctor's free, full, and candid explanation of the whole case that he authorises his counsel to apologise to the doctor, and to enter a *nol. pros.* in the case."—*Boston Med. Jour.*, March 18.

REPORTS OF SOCIETIES.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.

Monday, April 5.

Mr. A. Woodhouse, President, in the Chair.

On Diseases of the Teeth as a Cause of Epilepsy.

Mr. Henry Sewill read a paper on this subject. In the course of the discussion on Dr. Brunton's paper on "Nervous Diseases connected with the Teeth," read at the previous meeting of the Society, Mr. Sewill had said that he had never, either in hospital or in private practice, met with a case of epilepsy due to diseased teeth, and he believed such cases to be extremely rare. Other members having stated that they had met with several such cases, and that they believed dental irritation to be a not very uncommon cause of epilepsy, Mr. Sewill now brought forward arguments in support of his views, and quoted the opinions of several well-known authorities on nervous diseases. Dr. Gowers, Dr. Sieveking, Dr. Hughlings-Jackson, Dr. Ferrier, and Dr. Buzzard, all stated that they had never yet met with a case of epilepsy in which there was any reason to attribute the fits to the irritation of diseased teeth. Mr. Sewill thought it would be evident that if diseased teeth acted as excitants of epilepsy on any but very rare occasions, that disease would be much more common than it was at present. At the same time he should advise that in any case where epilepsy and diseased teeth were found to coexist, the sources of dental irritation should, if possible, be removed, but without holding out much hope to the patient that this treatment would influence the fits.

A discussion followed, in which Messrs. Walker, Coleman, and Coles took part.

Mr. Sewill having replied,

The President opened the adjourned discussion on Mr. Oakley Coles' paper

On Deformities of the Upper Jaw

by reading a short outline of the paper. Mr. Coles having first referred to the present confused nomenclature of deformities of the upper jaw, and the absence of any attempt at their classification, proceeded to describe a system of measurement and classification which he thought might prove generally useful. He measured the jaw by drawing a triangle, the base of which was formed by a line drawn from the centre of the distal surface of the second molar on one side to the same point of the corresponding tooth on the other. Then from the ends of this base line he drew two others meeting at the space between the two central incisors. In addition to the data given by this triangle, he also took the diameter of the jaw at the level of the second bicuspids. Mr. Coles first applied these measurements to healthy jaws, and showed that there were certain differences in the jaws of different nationalities, and then applied them to the classification of deformed jaws. These last he divided into seven different classes—1st. The dolichoid jaw, in which the extremities of the interbicuspid line coincided with the sides of the triangle. 2nd. The brachoid, in which the length from base to apex of the triangle is less than the average, and the interbicuspid line ends either within or without the sides of the triangle. 3rd. The macroid jaw, in which all the measurements are above the average, though normal in their relations to each other. 4th. The microid, in which all the measurements are below the average standard. 5th. The intermaxillary prognathous jaw, in which the distance from the interbicuspid line to the apex of the triangle is greater than the distance to the base. 6th. The intermaxillary upognathous jaw, in which the interbicuspid line falls in front of its normal position, the measurement from it to the apex being less than from it to the base of the triangle. 7th. The lambdoid jaw, in which the outline of the dental arch is wedge-like, and resembles the Greek letter *lambda*. Mr. Coles concluded his paper by some observations on the causes which produced these deformities of the jaws.

The President then called upon

Dr. Walker, who criticised Mr. Coles' account of the etiology and pathology of these deformities, especially of intermaxillary prognathism.

Mr. Balkwill, of Plymouth, described his method of measuring jaws and of drawing diagrams of the results.

Mr. Sewill severely criticised the terms which Mr. Coles had chosen to distinguish his various classes, and also called in question the opinions arrived at by Mr. Coles in the latter part of his paper.

Dr. Cobbold, of Colney Hatch, compared the results of a series of measurements which he had made at Leavesden, under the superintendence of Dr. Clay-Shawe, and also some made by himself according to Mr. Coles' method, with those arrived at by Mr. Coles.

Mr. Charles Tomes thought that Mr. Coles had made an advance in the right direction, but that his scheme would have to undergo some considerable modifications in order to suit it for general use.

Mr. Oakley Coles then replied, and the meeting terminated.

PATHOLOGICAL SOCIETY.

Tuesday, April 6.

Jonathan Hutchinson, F.R.C.S., President, in the Chair.

Mr. R. J. Godlee read the report of the Morbid Growths Committee on Dr. Abercrombie's specimens of Tumours of the Skull formerly exhibited. The tumours were found to be sarcomatous growths with small round cells. They had originated in the deeper layers of the periosteum and in the dura mater, and not in the bony tissue itself.

Molluscum Contagiosum.

Mr. Startin exhibited drawings illustrative of a case of this disease and of the appearances found on microscopic examination. The patient, a child, thirteen months old, had apparently caught the disease from a sister. Molluscous bodies, with clear, highly refractile epidermic cells, were found within the tumours. Vertical sections revealed the molluscous bodies in the centre, with vacuolation of some of the cells. There were also appearances as if of abortive attempts at hypertrophy of glandular elements. He regarded the molluscous tumours as of glandular origin, but as originating from abortive rather than from normal sebaceous glands. They occurred only where sebaceous glands were abundant, and were most frequently seen in patients who exhibited other signs of perverted nutrition. Their contagious character, he thought, was due to the rapid formative power of the partially developed protoplasm of the lowly organised sebaceous elements.

Dr. Thin remarked that he had recently, at the Medico-Chirurgical Society, advanced much the same view regarding the origin of these molluscous tumours.

Dr. Pye-Smith thought there were two different kinds of tumours included under the term "molluscum contagiosum"—first, those entirely of sebaceous origin, in which the glands were distended by retained secretion; and, secondly, others in which there was a distinctly new growth of glandular tissue without any evidence of retention of secretion, the columnar cells having undergone molluscous degeneration. Treatment, also, seemed to bear out this twofold division of the tumours.

The President said that German observers had maintained that these growths originated in the rete Malpighii quite independently of pre-existing glandular tissue, and Dr. Sangster had recently supported this view in a very able communication. The speaker's own view was that as all the tumours included under the term "molluscum contagiosum" were so alike, they all probably originated in the same manner, and there was much to be said in favour of the idea that they originated in abortive but potential sebaceous glands previously inactive. Dr. Sangster maintained that the central opening in each of the growths was the aperture of a hair-follicle, but the speaker thought that even if it were so, that was a strong presumption that the growth had arisen from the adjoining sebaceous gland. The structure of the growths also suggested a glandular origin.

Dr. F. Taylor could not agree with Dr. Pye-Smith in recognising the two distinct kinds of molluscous tumours the latter had referred to. The first variety he had mentioned was merely a sebaceous cyst; it was only the second variety that could be regarded as the real molluscous tumour. The speaker did not regard the presence of a central orifice as of much importance in explaining the origin of the tumours; he had seen as many as three, or even four, orifices on one small tumour, and he had a microscopical specimen which showed three openings leading to three separate acini, but apparently not to separate follicles. As sebaceous glands were originally developed by an infolding of the rete Malpighii, it was quite possible that a similar development might occur abnormally in later life, and thus give rise to these molluscous growths.

Dr. Pye-Smith stated, in reply to the President, that he had not seen the two varieties he had spoken of on the same patient.

Mr. Startin remarked that his view of the origin of these tumours seemed to differ somewhat from Dr. Thin's, for while he understood the latter to maintain that they arose from the rete Malpighii, he (the speaker) ascribed them to the morbid development of previously inactive abortive sebaceous glands. He had often failed to find any opening in the tumours.

Elephantiasis.

Dr. Thin exhibited (for Dr. Henderson, of Shanghai) a series of photographs illustrative of this disease. One group of the latter showed the disease as affecting at the same time three successive generations—grandfather, father, and son. Another group of photographs exhibited the results of treatment by the elastic bandage, by the pressure of which the diseased condition was greatly modified, though not removed. A complete and permanent cure had resulted in the case of a man who had had both legs affected. One of his limbs had become so painful and useless that it was amputated through the diseased tissue at the thigh. The disease forthwith disappeared not only in the stump of the amputated limb, but also in the other leg. This result, Dr. Thin suggested, might have been due to the diminution of blood-pressure consequent upon the operation, during which much blood had been lost. Dr. Thin also exhibited sections and drawings illustrative of the histology of elephantiasis—the tissue examined being from a specimen of elephantiasis of the prepuce lately shown by the President. The growth was found to consist of immature fibrous tissue, not differentiated into distinct bundles. The cells occurring in the tissue had an unbroken contour and a single nucleus, with no processes, and no apparent tendency to cell-division. Their size varied from that of a lymph corpuscle up to that of a fully developed cell. The latter was a typical, flat, endothelial cell of some size, while the smaller cells could not be distinguished from lymph corpuscles. Between these two extremes there were seen all gradations, but in all stages the cells were quite distinct from the fibrous tissue, although they were seen to be closely applied to the incompletely developed fibrous tissue which constituted the *substantia propria* of the tissue. He saw nowhere any evidence that the cellular elements gave rise to the fibrous tissue; the cellular and fibrous elements seemed always quite distinct. No stellate cells like those described by Rindfleisch, Hebra, and Kaposi as showing division of nuclei and proliferation were found; Dr. Thin, indeed, considered that such appearances were fallacious, and were due to unsuccessful hardening. Throughout the tissue was also found scattered much involuntary muscle. Dr. Thin maintained that the cells he had found in the elephantiasis growth were of the same form as the typical connective tissue cell as it had been described by Key and Retzius and by himself—viz., as a flat endothelial cell, of unbroken contour, and without processes. The connective-tissue corpuscle of Virchow and Stricker, he thought, was formed by the presence of the nucleus of an endothelial cell in the interstices of the tissue; while the corpuscle of Waldeyer and Ranvier he considered to be formed by an endothelial cell with more or less membranous material adherent to it. Some of the cells figured by Ranvier, however, were simply perfect endothelial cells. He had not found any filariæ in the sections he had examined.

Dr. Cavafy said the shape of the connective tissue corpuscles was a point of considerable interest. He thought there was no doubt that there were really branched cells in mucous membrane and in the cornea. If flat cells were folded by the pressure of bundles of fibrous tissue, they would exhibit the winged appearance described by Ranvier. He looked upon all connective tissue as a form of lymphatic tissue. Dr. Thin's flat cells were closely allied to endothelium. If the lymphatics were much hypertrophied in elephantiasis he would expect to find a development of muscular fibres in their walls.

The President said that Sir Joseph Fayrer had remarked, regarding the specimen which Dr. Thin had now examined, that a large amount of muscular tissue would, in all probability, be found in it.

Dr. Thin, in reply, said that he believed the one typical form of connective-tissue cell was the flat endothelial cell; the other forms were compounds produced by the cell together with other elements. The so-called branched cells of the cornea were not cells at all, but were spaces in the same sense as the connective-tissue corpuscles described by Virchow, as seen in a transverse section of tendon, were spaces. Preparations of the cornea in his possession showed the existence of complete endothelial layers in its substance. One specimen, a mouse's cornea, showed three separate layers at different depths, and also, on the anterior surface from which the epithelium had been removed, a delicate sub-epithelial endothelium like that described as occurring in the intestine. In reference to the so-called lymph-canalicular system, he thought the term misleading, for there were no canals in the sense of distinctly walled tubes. Moreover, there was no evidence to prove that these spaces in the interstices of the tissues are directly continuous with lymphatic capillaries. The latter, so far as was yet known, formed a closed system of vessels just like the bloodvessels.

Horny Growth from the Eyelid.

Mr. Walsham exhibited this specimen, removed from the lower eyelid of a lady aged eighty-seven. It had grown to a considerable size in two months. The tumour consisted entirely of epidermic cells arranged in columns. On transverse section they showed a concentric arrangement simulating "nests." He thought the growth must have begun as a wart.

Melanosis of the Finger.

Mr. Godlee exhibited drawings illustrative of a case of melanosis of the finger occurring in a girl nine years of age. Four years before its amputation the last joint of the finger was seen to be swollen. A small black spot appeared on it a year later. This spot enlarged slightly, and several other similar spots appeared near the original one. The finger was amputated, and the speaker had expected to find the black spots due to melanotic sarcomatous growths. But, instead of that, he found the black discolouration was confined to the epidermis, and was probably due to altered blood. He had been able to make out blood corpuscles among the altered epidermic cells near the surface of the epidermis. The deeper cells of the epidermis contained oily material and brown pigment. The specimen was unique in the experience of the exhibitor.

Disease of Larynx in Congenital Syphilis.

Dr. Barlow exhibited a larynx removed from a child, eleven months old, the subject of congenital syphilis. The child, when about five months old, was observed to have a weak and hoarse voice; there was also a hoarse cough. These symptoms varied, but there was never evidence of laryngeal dyspnœa until about the time of death, which took place rather suddenly after a few days' illness. Post-mortem, there was found some œdema of the arytenoepiglottidean folds, very slight erosion of the mucous surface above and below the vocal cords and in the ventricles, with a very few thin and closely adherent laminæ of false membrane. Death had apparently resulted from the supervention of a membranous inflammation upon a chronic laryngitis. Dr. Semon had recently stated that disease of the larynx was very rare in congenital syphilis, but the speaker had found it quite common for such children to have a hoarse weak voice along with more evident results of specific disease. As the voice improved along with the other symptoms under mercurial treatment, little attention was paid to it. In many of these cases any slight catarrh readily affected the larynx after its apparent recovery; there probably remained a subacute laryngitis specially liable to take on more acute disease. Dr. Warner had shown him a case presenting true warty growths on the larynx in a syphilitic child.

Dr. Allen Sturge exhibited the larynx of a boy two years and a half old, who, when brought to him, had intense dyspnœa, both inspiratory and expiratory, with stridor. He was also cyanosed, and his voice was reduced to a whisper. The child had evident signs of congenital syphilis, inherited from his father, who had had severe laryngitis during the secondary stage of the disease. The patient improved under mercurial inunction, but died suddenly one day when being brought to hospital. Post-mortem, the mucous membrane of the left half of the glottis was greatly swollen, quite down to the rima. Ulceration had been extensive, and had destroyed both the true and the false vocal cords, especially on the left side. Cicatrisation had caused a slight degree of stenosis of the upper part of the trachea.

Dr. Lees had also found affections of the larynx common in congenital syphilis. He referred to several cases that had recently come under his observation.

Dr. Semon said he had not intended to imply that affections of the larynx were rare in congenital syphilis. What he had stated was that the deeper lesions were rare in this disease, superficial inflammation being common enough. There were very few records of instances of the deeper lesions, and even in cases where the nose and palate had been destroyed in congenital syphilis there had very rarely indeed been any destructive lesions of the larynx.

Dr. Barlow further mentioned that Dr. Bumstead, of America, had recorded six cases of deep laryngeal ulceration.

Dr. John Mackenzie (of America) stated that he had collected seventy-eight or eighty cases of marked disease of the larynx in the subjects of congenital syphilis. Indeed, he thought laryngeal mischief quite as common in congenital as in acquired syphilis. It was only twenty years ago that laryngeal mischief was regarded as a pathological curiosity even in acquired syphilis.

Spinal Cord in Tetanus.

Mr. Alban Doran and Dr. Vincent Harris exhibited several microscopic preparations of a spinal cord taken from a case of tetanus occurring after ovariotomy. The tetanus had apparently been the result of exposure to a cold draught. The tetanus was strongly marked, death resulting from asphyxia. The stump of the pedicle was found quite healthy. The exhibitors had failed, after careful examination, to find disintegration of the grey cornua described by the late Lockhart Clarke. They had, however, found one or two of the transparent, unstained, isolated patches described by Dickinson, Coates, and others. They had found similar transparent patches in the cord taken from another case of tetanus. In addition to these patches, they had observed proliferation of the small neuroglia nuclei under the epithelium lining the central canal in the lumbar region of the cord. In the cervical region an exudative band was seen stretching quite across the canal, and there were also signs of exudation in the cervico-dorsal region. They had not observed any shrinking of the stellate cells of the grey matter.

The following specimens were exhibited by card:—

1. By Mr. S. G. Shattock—Recent Division of Tendo Achillis.

2. By Mr. Eve—Calcareous Tumour from Peritoneal Cavity.

3. By Dr. Lediard—Specimen of Excision of the Knee performed twelve years ago by Sir William Fergusson.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, April 13.

John E. Erichsen, F.R.C.S., F.R.S., President, in the Chair.

Case of Extreme Pharyngeal Stenosis, the Result of Syphilis.

Dr. Gilbart Smith and Mr. Walsham contributed this paper. The subject of the case was a woman aged forty-seven, who was admitted on October 29, 1878, into the Royal Hospital for Diseases of the Chest, under the care of Dr. Gilbart Smith, suffering from prostration and dysphagia accompanied by severe and recurrent attacks of dyspnœa. She gave a clear history of syphilis which she had evidently contracted soon after her marriage, twenty-six years ago. She suffered for the first time ten years ago from ulceration of the throat. This was relieved by treatment, but recurred at intervals up to the time of her admission. Eight months ago her voice became affected and the movements of the tongue impeded. For six months she had been unable to swallow food, and for

two months had suffered from severe and alarming attacks of dyspnœa. The tongue could not be protruded beyond the teeth; the right posterior pillar of the fauces was drawn backwards and was adherent to the posterior wall of the pharynx. The uvula and a considerable portion of the soft palate had disappeared, leaving a clean semicircular border to the portion that remained. On laryngoscopic examination the epiglottis and vocal cords could not be seen, but an aperture was visible one-eighth of an inch in diameter at the bottom of a funnel-shaped depression to the left of the middle line on a level with the epiglottis. This was separated by a thick cicatricial band from another and deeper depression to the right, which terminated in a *cul-de-sac* containing pus. This small aperture, after considerable difficulty, was made out to be the only entrance to the larynx and œsophagus. Tracheotomy was performed by Mr. Walsham on November 1. On November 24, attempts at dilatation were made, and on succeeding days repeated, but they failed to produce any material benefit. Stretchings by means of laminaria and sponge-tents could not be borne. On December 5, Mr. Walsham partially divided the cicatricial band bounding one side of the aperture with M. Ricord's urethrotome. On the 8th it was further divided with a pair of curved scissors. One blade being placed in the aperture, the other in the ulcerated depression, incision was made little by little from above downwards, so that a full view was obtained of the cut surface of the tissues, and any vessels, if divided, could be seen and secured. Care was taken to enlarge the aperture as much as possible in such a direction as would allow the food in passing downwards to avoid the entrance into the larynx. The parts were then forcibly dilated by the finger and œsophagus-bougie. On December 12 another incision was made at a different spot, and the epiglottis, vocal cords, and arytenoid cartilages came into view. When the patient left the hospital, December 18, the aperture measured three-quarters of an inch in diameter, and admitted a full-sized œsophagus bougie. On September 23, 1879, she was again seen by Dr. Gilbart Smith. The aperture had not contracted in the least. Stenosis of the pharynx appears to be very rare. The authors described three distinct forms. The first, the most common, is situated between the naso and mid-pharynx, and is caused by ulceration and contraction of the posterior pillars of the fauces, and the drawing backwards and subsequent adhesion of the soft palate to the pharyngeal wall. Cases of this kind have been reported by Messrs. Bradley, Chevers, Reid, Coulson, and Schech. The second form is more rare. It occurs between the mouth and the pharynx, and is produced by the ulceration and contraction of the anterior fauces, and the drawing downwards and subsequent adhesion of the soft palate to the dorsum of the tongue. A case was reported by Mr. West. The third variety involves the lower part of the pharynx, as in the case now before the Society; the stenosis being produced by bands of adhesions, or soft or tough membranes which stretch across the pharynx and glue the parts together. Other similar cases are reported by Schech, Gerhardt, Trendelenburg, Schroetter, West, and Chevers. The authors draw the following conclusions:—1. That tracheotomy is called for both as a temporary expedient, to obviate sudden death from asphyxia, and as an essential factor for safe and satisfactory treatment. 2. That division with a guarded knife presents advantages over other methods of treatment. 3. That several small notches are preferable to a deep incision, and that when possible the parts should be divided from above downwards so as to allow a full view of the surface of the tissues divided. 4. That the aperture should be enlarged in a direction so as to permit the passage of liquid food clear of he entrance to the larynx.

Dr. Habershon said that the paper was one of great interest both because of the rarity of the affection described and on account of the relief afforded by incision. He asked: 1. Was the condition the result of cicatricial contraction? 2. Was there any development of new tissue as in old cases of syphilis? 3. Were any internal remedies, such as iodide of potassium, used after the operation, to promote absorption of tissue?

Dr. F. Semon said the authors of the paper were to be congratulated on their success. All who were acquainted with the subject would agree with them, that attempts at dilatation were of avail only so long as they were used. A fair trial should be given to dilatation; but, when it did not succeed, no time should be lost before operating. Prophylactic tracheotomy was to be recommended in such cases, so as to avoid the necessity of partly performing the operation when it became urgently required, and was therefore more difficult. Syphilis tended, according to Gerhardt, to afflict the upper part of the respiratory passages more than the lower. In 1100 cases the pharynx was affected in 800 and the larynx in 300.

Dr. Hilton Fagge asked whether the contraction was preceded by a corresponding degree of ulceration. He thought that little was known of the pathological conditions in cases of tracheal stricture. He had met with a case of stenosis of the pharynx, under the care of Mr. Durham. The constriction was not so great as in the present case, but there was much dysphagia. Relief was obtained by the use of bougies and a course of mercurial fumigation.

Dr. R. E. Thompson suggested that the introduction of food by the rectum might be useful in such a case.

The President said that, many years ago, he had performed a number of experiments on animals, and had also observed many cases in which the throat was opened by surgical operation, or for the purpose of suicide; and had observed that, in such cases, the entrance of food into the air-passages was not attended with the usual distress. Preliminary tracheotomy before operation on the throat not only did not complicate the procedure, but diminished its danger.

Dr. Gilbart Smith said that iodide of potassium was given both before and after the operation. Ulceration was undoubtedly present; but there was also apparently a great deal of thickening by new tissue. The relief afforded by the incision was so great that nutritive enemata did not appear to be called for; but in another similar case he would administer them. The President's remarks on the effect of tracheotomy in lessening of spasm of the larynx were important. Paralysis of the laryngeal muscles had been known to follow tracheotomy.

On the Partial Metabolism by the Liver of Leucin and Tyrosin into Urea.

Dr. Anderson read this paper. He remarked that it had been universally taught and accepted that leucin and tyrosin were present most especially in acute yellow atrophy of the liver. That, in addition, one or both have been discovered by Beale in chronic wasting of the liver and in leucocythæmia; by Frerichs and Städeler in typhus, small-pox, and some of the other exanthemata; and Balfour inferred, if he did not state positively, that they, or at least certain abnormal constituents, were present in the urine in a case of remora of the hepatic circulation due to valvular disease. Murchison, however, attributed their presence in typhus, etc., as due to concurrent acute atrophy. Having met with (on November 11, 1877) a case of jaundice arising from obstruction, the author, more through curiosity than from anything else, examined the urine for leucin and tyrosin, and discovered them; moreover, finding that, during convalescence, first tyrosin disappeared, and finally leucin, and that during each return of the symptoms, on future slight recurrences, leucin reappeared, he determined upon prosecuting strict and extended research for these constituents in as many pathological manifestations as came under his notice. As a result, out of 33 individuals (about 10 of whom came under his care frequently, and therefore, counted as cases, their numbers would exceed 60) in whose urine either leucin alone or tyrosin and leucin existed, there were of jaundice, 2; mitral and aortic incompetency, 1; cirrhosis, 1; acute rheumatism with pneumonia, 2; nephritis with dyspepsia, 1; anæmia, 1; phthisis with intestinal obstruction, 1; phthisis, 1; colic, 1; pleuro-pneumonia, 2; chronic bronchitis, 1; hepatic derangement, 5; emphysema, 2; Bright's disease with presystolic and mitral systolic bruits, 1; bronchitis with asthma, 1; acute rheumatism, 1; chronic and spasmodic asthma, 3; puerperal eclampsia, 1; delirium tremens, 1; hemiplegia, 1; pertussis, 1; cancer of liver, 1; puerperal septicæmia and embolism into base of right lung, 1. That is to say, there were over 18 or 19 different diseases in which either leucin alone or tyrosin and leucin were present. These diseases differed among themselves, and they did not include either acute yellow atrophy, chronic yellow atrophy, typhus, small-pox, or the other exanthemata. Tyrosin was said to generally accompany leucin, but it was absent in 19 out of the 33 individuals; moreover, it most usually occurred in only the severe manifestations of disease. Some physiologists asserted, but by others it was disputed, that in certain cases urea was almost completely replaced in the urine by leucin and tyrosin. Beale found tyrosin in considerable quantity in urine which contained much uric acid. In the

author's case of puerperal eclampsia, out of a total of five fluid ounces of urine passed in three days, albumin was copious, uric acid in enormous quantity, urea in only minute amount, much leucin and tyrosin. In the hemiplegia cases, at the commencement albumin was very appreciable, leucin abundant, urea deficient. Within a week of taking euonymin nightly, albumin was reduced to a mere trace, leucin greatly lessened; more urea and water in urine. Under similar treatment a like increase of urea and diminution of leucin, or of tyrosin and leucin, occurred in Nos. 12, 23, 24, 25, 26, 29, 30, 31—of the individuals whose diseases are recorded. The author was therefore of opinion that the presence of leucin and tyrosin in the urine was dne to corresponding deficiency of urea, that this was not invalidated by the circumstance of the simultaneous existence of much leucin and tyrosin and increased quantity of urea, for that during great destructive metabolism —such, for instance, as occurred in the course of many diseases —the liver was so overtaxed as to cast into the blood not only urea in large amount, but the overplus of waste, viz., leucin and tyrosin; moreover, as convalescence advanced, although the absolute quantity of urea daily eliminated may have become less, the most marked and progressive diminution took place in leucin and tyrosin, and occasionally in albumin and uric acid. As a strong presumption in favour of the theory, that among the many functions of the liver the formation of urea from leucin, if not from tyrosin, may be ranked as one, it has been instanced that in cases of acute atrophy of the liver, where the hepatic gland-cells lost their functional activity, the urea of the urine was replaced by leucin and tyrosin. If such were the case, the inference seemed irresistible that the numerous diseases in which leucin and tyrosin (one or both) were shown to have been present; their diminution during convalescence; reappearance and increase during each return and exacerbation of the symptoms; their final disappearance and the order of it, viz., firstly tyrosin, and then leucin; the circumstance that tyrosin appeared only in and during the severer manifestations; their increase and diminntion in inverse proportion to the amonnt of urea; and lastly, the influence exerted by the preparations of salicin and euonymin (well-known hepatic stimulants) in increasing the quantity of urea and in diminishing that of leucin and tyrosin;—all strengthened and supported in the fullest possible manner this theory. Frerichs asserted that leucin and tyrosin are found only in the hepatic, and *not* in the portal vein. The author said that this would seem irreconcilable, in the face of so much to the contrary, but for one possible explanation—viz., the early stages of so-called "nutmeg" liver. Here, owing to "remora," there was congestion and partial stasis of the contents of the intralobular veins, and consequently pressure upon and interruption to the functional activity of the gland-cells immediately surrounding them.

Bribery by Jewish Conscripts in Russia.—At a recent trial at Warsaw, Dr. Wolpert was convicted on the charge of having received money for declaring that certain Jewish conscripts were unfit for service. He was sentenced to a deprivation of all rights and a six years' exile in Siberia. —*St. Petersb. Med. Woch.*, April 3.

Registration Returns for Dresden, Vienna, and Munich for 1879.—The *K. Deutsche Gesundheitsamt* gives the following figures in the supplement to its *Veroffentlichung* for March 30:—1. *Dresden:* Population, 215,440; entire number of living births in 1879, 7782 (4008 males and 3714 females), or 3·61 per cent. to the population; born dead, 369 (216 males and 153 females), or 4·53 per cent. of the entire number of births; total deaths, without the born-dead, 5175 (2708 males and 2467 females), or 2·40 per cent. to the entire population. 2. *Vienna:* Population, 743,900, including the garrison of 22,000; living births, 28,281 (14,478 males and 13,803 females), 3·802 per cent. to the entire population; born dead, 1380, or 4·65 per cent. of the entire number of births; total deaths, excluding the born-dead, 21,062 (11,154 males and 9907 females), or 2·831 per cent. of the entire population, after deducting 2639 strangers or 2·476 per cent. 3. *Munich;* Population, 232,000; living births, 9089 (males 4645, and females 4444), or 39·18 per 1000 of the entire population; born dead, 244, or 2·61 per cent. of the entire number of births; total deaths, 8081 (males 4249 and females 3832), or 34·83 per 1000 of the entire population.

OBITUARY.

WILLIAM SHARPEY, M.D., LL.D., F.R.S.

Professor Sharpey, whose death, on April 11, we announced last week, was born at Arbroath, in Scotland, on April 1, 1802, his father being, we believe, an English gentleman who had settled in that place. After passing through the usual course of school education, William Sharpey went to the University of Edinburgh and attended the Greek and Natural Philosophy Classes. In 1818 he entered as a medical student, and in 1821 obtained the diploma of the Royal College of Surgeons of Edinburgh. He then came to London, dissected for three months at Brooks' School, and during the following winter studied clinical medicine and surgery in Paris. Returning then to Edinburgh, he took the M.D. degree of that University in 1823, and afterwards practised for a while in Arbroath. But he soon gave up that plan of life, and proceeding again to the Continent, spent some months, devoted to general culture, in Italy. At Pavia he resumed the study of anatomy under Panizza, and afterwards made a long stay in Berlin, where he gave himself up especially to the study of anatomy and physiology under Rudolphi. In 1830 he became a Fellow of the Royal College of Surgeons of Edinburgh, and in 1831 began to lecture on anatomy in the Extra-Academical School, having his friend Dr. Allen Thomson as his associate. That work he carried on till, in the year 1836, he accepted the invitation of the Council of the University of London (now University College) to fill the chair of Anatomy and Physiology vacated by Dr. Jones Quain; and he continued to teach physiological anatomy and physiology there till April, 1874. Great as were his services to science in many other ways, it was as a teacher that he was most especially distinguished. The writer—himself we believe one of the most eminent physiologists of the day—of a notice of Dr. Sharpey in last week's *Nature*, says: "For years he was the greatest teacher of anatomy and physiology in this country, occupying a position side by side with Johannes Müller in Germany. Just as the influence of Johannes Müller's life and teaching is still powerful in that of his pupils, so we may confidently anticipate that Sharpey's work will follow him. Of the fellow-workers in his own field who are at this moment mourning his loss, there is perhaps not one who does not directly or indirectly owe him that which made him what he is; nor should we be far wrong if we were to add that those who are best endowed owe him most."

If there is one thing more than another that has influenced scientific medical education, it has been Sharpey's introduction to the famous Quain and Sharpey's "Anatomy." To us in student-days it came like a revelation, and we have clung to it ever since. What it taught then is safe teaching now. The descriptions are fresh and vigorous, and, let us add, accurate now as then; the interpretation may be different, but the facts are there. Sharpey "on bone" is still, we believe, unrivalled. Many have dated physiological teaching in this country from Baly's translation of Müller, but, valuable as that was to all of us, it did not effect what was done by the personal influence and the teaching of *facts* by Sharpey.

When Dr. Sharpey resigned his Professorship in University College he was appointed Emeritus Professor; and the Government of the day recognised the value of his long services by bestowing upon him a pension of £150 a year.

In 1839, when he was already a Fellow of the Royal Society of Edinburgh, Dr. Sharpey was elected a Fellow of the sister Society of London, of which he was appointed Secretary in 1854, and filled that office for nineteen years with great advantage to the Society. Shortly before his appointment, important changes had been made in the administration of the Society, in the bringing about of which he had taken part; and it has been generally felt and acknowledged that the beneficial effect of these changes, in increasing the usefulness of the Society and advancing its prosperity, was largely due to the wisdom and judgment, as well as the energy, with which he discharged the duties of his important office. The secretary of such a society ought not to be a man of one science only, however great his eminence in it might be, but a many-sided and large-minded man, capable of an intelligent sympathy with, and of taking an interest in, the

labours of workers in other fields of scientific pursuits besides his own more special one, and of appreciating their work. Dr. Sharpey was such a man, and hence his special fitness for and success in the office he so long held.

Dr. Sharpey long acted as an Examiner in the University of London, and was subsequently a member of the Senate; and since 1870 he had served on the Royal Commission on Science. In April, 1861, he was appointed one of the Crown nominees on the General Medical Council, and continued to hold that office until May, 1876, acting also during ten years of the time as one of the treasurers of the Council. He was also a trustee of the Hunterian Museum. In 1859 he received the honorary degree of LL.D. from the University of Edinburgh, on the occasion of the late Lord Brougham's installation as Chancellor of the University; and he was also a member of various foreign academies. His scientific publications were not numerous, we believe, but they were distinguished by remarkable carefulness and accuracy of observation and description. One of the earliest was that on "Cilia and Ciliary Motion," and appeared in 1830 in the "Cyclopædia of Anatomy and Physiology"; and he was joint-editor of three editions of Quain's "Anatomy," in which work many of his articles were embodied.

In 1869 many of his pupils determined to found in University College a "Sharpey Physiological Scholarship," in connexion with the "Sharpey Physiological Laboratory," as a mark of their esteem and regard for their teacher; and this project was, with his consent, carried out, his approval being shown by his presenting to the laboratory his anatomical and physiological library, which contained the works of foreign as well as of British writers.

The writer from whose notice of Dr. Sharpey we have already quoted says: "The qualities which chiefly distinguished him intellectually were, the variety of his knowledge, the accuracy of his memory, which he retained to the last without appreciable impairment, and his sound discrimination in all matters of doubt or controversy. To his friends he was endeared by his habitual consideration for the welfare and interests of others, his unwillingness to think ill even of those whose conduct he disapproved, and his transparent truthfulness."

Dr. Sharpey, who had for some time suffered from bronchitis, and had been staying at Hastings, caught cold soon after his return to London, about three weeks ago, and died after a few days' illness. His remains were removed on the afternoon of Thursday last week to University College, met there by a large number of friends, and thence taken to the railway for conveyance to Arbroath for interment. The funeral *cortége* included some fifty private carriages.

MEDICAL NEWS.

Royal College of Surgeons of England.—The following gentlemen, having undergone the necessary examinations for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 20th inst., viz.:—

Chadwick, James M., Manchester, student of the Charing-cross Hospital.
Clegg, Walter T., Liverpool, of the Charing-cross Hospital.
Day, William A., Hampstead, of the Bristol School.
Francis, Lloyd, Carmarthen, of the London Hospital.
Fraser, Donald A., Weston-super-Mare, of St. Mary's Hospital.
Gripper, Arthur D., Ware, of St. Thomas's Hospital.
Harris, John R., Bayswater, of Guy's Hospital.
Hewitson, William A., Newcastle-on-Tyne, of the Charing-cross Hospital.
McDonagh, James S., Hampstead-road, of University College Hospital.
Matthews, Valentine, Torrington-square, St. Mary's Hospital.
Paddle, James J., Albert-street, N.W., of University College Hospital.
Puddicome, William N., Edgware, of Guy's Hospital.
Renner, Charles, Harley-street, of University College Hospital.
Richardson, Charles B., Great Hadham, of St. Thomas's Hospital.
Richardson, John H. H., Sparkbrook, Worcestershire, of the Charing-cross Hospital.
Sayer, Mark F., Finchley, of University College Hospital.
Spranger, Francis J., Cadogan-place, of St. George's Hospital.
Tooth, Howard H., Brighton, of St. Bartholomew's Hospital.
Walters, Frederick R., Croydon, of St. Thomas's Hospital.
Wells, Arthur P. L., Windsor, of the Edinburgh School.

Nine candidates were rejected. The following gentlemen were admitted on the 21st inst.:—

Ashwell, Herbert G., Nottingham, student of Guy's Hospital.
Bedford, Walter G. A., Sydenham, of St. Bartholomew's Hospital.
Bovill, Henry H., James-street, S.W., of Guy's Hospital.
Bridges, Ashley C., Worcester.
Buller, Audley C., Piccadilly, of St. Bartholomew's Hospital.
Collier, William, Stapleford, of King's College Hospital.
Ewbank, Henry, Plymouth, of University College Hospital.
Farmer, Septimus, Nottingham, student of King's College Hospital.
Hill, Alexander, Lee, S.E., of St. Bartholomew's Hospital.
Hoyle, William E., Newcastle-on-Tyne, of St. Bartholomew's Hospital.
Jerome, John W., Jersey, of King's College Hospital.
Jones, Rees R., Newcastle-on-Tyne, of the London Hospital.
Jones, William C., Llyswen, Breconshire, of the Middlesex Hospital.
Langridge, Albert H., Dunstable, of Guy's Hospital.
Mead, Robert W., Whitby, of St. Bartholomew's Hospital.
Owen, Richard J., Llandovery, Carmarthenshire, of the London Hospital.
Pratt, Reginald, Billesdon, of University College Hospital.
Sloggett, Arthur T., Cambridge-gardens, of King's College Hospital.
Tinker, Frederick H., Southport, of University College Hospital.

Six candidates were rejected.

The following were the questions on Surgery submitted to the seventy-three candidates for the diploma of Membership of the Royal College of Surgeons last week, viz.:—1. Describe the parts concerned in the operation for the relief of a strangulated hernia in the inguinal canal. Give the steps of the operation. 2. Describe the relations of the lower third of the brachial artery. Give the steps of the operation for tying it at the bend of the elbow. How is the collateral circulation carried on? 3. What are the local signs and constitutional symptoms of suppuration beneath resisting structures? Where is such suppuration likely to occur? Give the treatment. 4. Describe the structure of the different forms of nævus, and their appropriate treatment. 5. How would you diagnose the nature of a tumour in the anterior triangle of the neck? 6. Describe in detail the process of union of a simple fracture of bone. Those candidates who had not previously undergone an examination in Medicine, had the following questions on that subject submitted to them, viz.:—1. What are chief causes of ascites? what are its symptoms, and how would you recognise its presence? Point out the distinctions between it and ovarian and hydatid cysts and distended bladder. How would you treat it? 2. Give the morbid anatomy, symptoms, and treatment of acute pneumonia. What are the properties, uses, and doses of the following drugs:—Tr. opii, pulv. opii, liq. morphiæ hydrochloratis, morphiæ hydrochloras, tr. cannabis indicæ, ext. cannabis indicæ, tr. colchici seminum, ext. colchici, liq. hydrargyri perchloridi, tr. ferri perchloridi, tr. ergotæ, tr. scillæ, oxymel scillæ, potassæ chloras, santoninum, and elaterium.

Apothecaries' Hall, London.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, April 16:—

Alldridge, William Edward, Fonthill House, Birmingham.
Collier, William, Infirmary-road, Sheffield.
Counsellor, Charles Eyre, Crawley Down, Sussex.
Meeson, Alfred, 42, Mile-street, Liverpool.
Stacey, Herbert Gleeson, Park-square, Leeds.
Taylor, Thomas Percy, Bocking, Braintree, Essex.
Terry, Henry George, Bilboa House, Mells, Frome.

The following gentleman also on the same day passed his Primary Professional Examination:—

Bowman, Richard, St. Mary's Hospital.

NAVAL, MILITARY, Etc., APPOINTMENTS.

Admiralty.—The undermentioned Surgeons have been promoted to the rank of Fleet-Surgeons in her Majesty's Fleet, with seniority of March 23, 1880:—Bernard Renshaw, John Allan Robertson, M.B.

BIRTHS.

Bellamy.—On April 16, at 17, Wimpole-street, the wife of Ed. Bellamy, F.R.C.S., of a son.
Cribb.—On April 18, at Bishops Stortford, Herts, the wife of Henry Cribb, L.R.C.P., of a son.
Foot.—On April 12, at Wells, Norfolk, the wife of R. H. Foot, M.D., of a daughter.
Little.—On April 13, at The Elms, Victoria-park, Manchester, the wife of David Little, M.D., of a daughter.
Lucey.—On April 14, at Southampton, Hants, the wife of C. Lucey, M.D., of a son.

MARRIAGES.

Arlidge—Udall.—On April 13, at Keele, Staffordshire, John Frederick Arlidge, Esq., of Howarth, Yorks, son of J. T. Arlidge, M.D., of High Grove, Stoke-upon-Trent, to Mary, eldest daughter of Thomas Udall, Esq., of Silverdale, Staffordshire.
Bennett—Kemp-Welch.—On April 15, at Clapham, Arnold James Bennett, Esq., of Wincanton, near Bath, second son of James Risdon Bennett, M.D., F.R.S., to Annette Maria, third daughter of John Kemp-Welch, Esq., of Clapham-common, Surrey, and Sopley, Hants.
Blaker—Belcher.—On April 15, at Brighton, Thomas Frederic Isaacson Blaker, M.R.C.S., to Mary Eliza, eldest daughter of Henry Belcher, M.D., of 12, Pavilion-parade, Brighton.
Burt—Henderson.—On April 14, at Camberwell, Alfred Burt, M.R.C.S., L.S.A., of Bourton-on-the-Water, Gloucestershire, to Amelia Mary, second daughter of James Henderson, Esq., of Adon Mount, Dulwich, and Red Lion House, Red Lion-court, Fleet-street, London.

COLGATE—JOLLY.—On April 14, at Bath, Henry Colgate, M.D., F.R.C.S., of Tresserans, Eastbourne, to Ethel Dobell, eldest daughter of William Crucknell Jolly, Esq., of Homclea, Lansdown, near Bath.

COLLINS—COBBETT.—On April 15, at Weybridge, Walter Charles Grosett Collins, M.B., of St. Austell, Cornwall, to Lucy Ella, fourth daughter of Arthur Cobbett, Esq., of Firfield, Weybridge, Surrey.

DAW—CARTER.—On April 8, at Southampton, John Daw, Esq., of Southampton, to Georgine E. M., widow of Captain Alexander Rodney Bligh Carter, R.N., and daughter of John M. Cotter, M.R.C.S.

HOLDEN—ANDREWES.—On April 13, at Sudbury, Suffolk, John Sinclair Holden, M.D., F.C.S., of Sudbury, to Mary, second daughter of George William Andrewes, Esq., of the same place.

HOLMES—BLOW.—On April 13, at Layer Breton, Thomas J. P. Holmes, M.B., Surgeon-Major A.M.D., to Gertrude Charlotte Isabella, eldest daughter of the Rev. Wm. Blow, M.A., rector of Layer Breton, Essex.

MARSHALL—DAVIS.—On April 18, at Dowles, Salop, H. Flamank Marshall, M.B. Lond., to Georgina Reynolds, fourth daughter of the late Peter Davis, Esq., of Beckmarsh Hall, Warwickshire.

PURKISS—MERTENS.—On April 15, at Brixton, Arthur Purkiss, M.B., to Hattie Mary, second daughter of H. W. Mertens, Esq., of Acre-lane, West Brixton.

WARNER—HOWARD.—On April 20, at Hampstead, Francis Warner, M.D., M.R.C.P., of 15, Finsbury-square, to Louie, eldest daughter of William Howard, Esq., of Lyndhurst-road, Hampstead.

WILLMOTT—BARNES.—On February 28, at Dunedin, New Zealand, Harry Francis, eldest son of Alfred Willmott, M.D., of Weston-super-Mare, to Emily, youngest daughter of the late Captain and Mrs. Barnes, of Hackney.

DEATHS.

BEATTIE, HENRY JOPP, eldest son of Alex. Beattie, M.D., of Porchester-terrace, Hyde-park, at Dilkoosha Cantonment, Oudh, on March 23.

GOURLAY, FREDERICK, M.D., at Weston-super-Mare, on April 20, in his 45th year.

HENRY, JAMES, M.D., Staff-Surgeon Royal Navy, at Clarmont Cottage, St. Helier's, Jersey, on April 8, aged 61.

LOCKLEY, THOMAS, M.D., and J.P. for the West Riding, Yorkshire, at 18, Bootham, York, on April 13, aged 68.

MOORE, RICHARD BOND, L.R.C.P., of Wolverhampton, on April 14, aged 35.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

CITY PROVIDENT DISPENSARY AND SURGICAL APPLIANCE ASSOCIATION, 145, ALDERSGATE-STREET, E.C.—Assistant-Surgeon. Attendance three hours daily. He must reside in the neighbourhood of the institution. For further particulars apply to the Secretary, J. P. Cæsar, Esq.

CLINICAL HOSPITAL FOR WOMEN AND CHILDREN, PARK-PLACE, CHEETHAM-HILL-ROAD, MANCHESTER.—House-Surgeon. Applications, with testimonials, to be sent, on or before May 3, to Mr. Marshall, Secretary, Barton-arcade, Manchester.

DERBY AMALGAMATED FRIENDLY SOCIETIES' MEDICAL ASSOCIATION.—Assistant-Surgeon. Candidates must be duly qualified and registered. Applications, with diplomas and original testimonials, to be sent to the Secretary of the Association not later than April 27. Further particulars to be obtained of the Secretary, Mr. J. Bullivant, 58, Abbey-street, Derby.

GENERAL LYING-IN HOSPITAL, YORK-ROAD, LAMBETH, S.E.—House-Physician. Candidates are requested to attend at the Hospital on Monday, the 26th inst., at 4.30 p.m., with their testimonials. Particulars may be had of the Secretary, A. Bassett Shairp, Esq.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, BROMPTON.—Assistant-Physician. Candidates must be Doctors or Bachelors of Medicine, and Fellows or Members of the College of Physicians. Applications and testimonials to be sent to the Honorary Secretary before May 5. (*For further particulars see Advertisement.*)

INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST AND THROAT, 26, MARGARET-STREET, CAVENDISH-SQUARE, W.—Visiting-Physician. Candidates must reside within a reasonable distance of the institution. Every information may be obtained from the Secretary, F. Baily, Esq.

LIVERPOOL DISPENSARIES.—Assistant House-Surgeon. Candidates must be duly qualified and unmarried. Applications, with testimonials and registration certificate, to be sent to the Secretary, Leith Offices, 34, Moorfields, Liverpool, on or before April 26.

NOTTING-HILL PROVIDENT DISPENSARY.—House-Surgeon. Applications, with testimonials, to be sent to the Hon. Secretary, W. P. Collins, Esq., 8, Pembridge-gardens, Notting-hill, W., on or before May 25.

PARISH OF ST. MATTHEW, BETHNAL-GREEN.—Assistant Medical Officer. Candidates must possess a double qualification in medicine and surgery. The election takes place on April 27, at five o'clock. (*For further particulars see Advertisement.*)

ROYAL SOUTHERN HOSPITAL, LIVERPOOL.—Junior House-Surgeon. Candidates must be medically and surgically qualified. Applications, with testimonials and registration certificate, to be sent to the Chairman of the Medical Board on or before April 28. (*For further particulars see Advertisement.*)

UNIVERSITY COLLEGE HOSPITAL.—Resident Medical Officer. (*For further particulars see Advertisement.*)

VICTORIA HOSPITAL FOR CHILDREN, QUEEN'S-ROAD, CHELSEA, S.W.—House-Surgeon. Candidates must be Fellows or Members of the Royal College of Surgeons of England, and Licentiates of the Apothecaries' Company or of the Royal College of Physicians, or graduates in medicine of any University recognised by the Medical Council. Applications, with testimonials, etc., to be sent to Captain Blount, R.N., Secretary, on or before April 30.

WORCESTER COUNTY AND CITY LUNATIC ASYLUM.—Junior Assistant Medical Officer. Candidates must be duly qualified and registered, unmarried, and not above thirty-five years of age. Applications, with testimonials, to be sent to Dr. Sherlock, at the Asylum, on or before April 24.

WESTMINSTER HOSPITAL, BROAD SANCTUARY, S.W.—House-Physician. Candidates are to be gentlemen who have completed their medical education at the Westminster Hospital, and are registered under the Medical Registration Act, 1858. The appointment will be for six months, with board and residence. Candidates are requested to send in their applications to the Secretary, S. M. Quennell, Esq., not later than April 27.

UNION AND PAROCHIAL MEDICAL SERVICE.

APPOINTMENTS.

Hungerford Union.—James Wilkie Burman, L.R.C.S. and M.D. Edin., to the Barnsbury District.

Liverpool Parish.—Robert Robertson, M.D. Edin., L.R.C.S. Edin., L.S.A., as a Medical Officer of the Brownlow Hill Workhouse.

Oldham Union.—Thomas Patterson, M.D., M.C. Queen's Univ. Ire., to the Fourth District.

Ongar Union.—James R. White, M.B., L.R.C.S.I., L.S.A. Lond., to the Second District.

Pocklington Union.—William. T. H. Von Beverhoudt, M.R.C.S. Eng., L.R.C.P. Edin., to the Sutton-upon-Derwent District.

St. Leonard (Shoreditch) Parish.—Mark K. Hargreaves, B.M., M.C. Glasg., as Assistant Medical Officer for the Workhouse and Infirmary.

THE twentieth festival of the Royal Medical Benevolent College, Epsom, will be held at the Langham Hotel, on Wednesday, the 28th inst., and will be presided over by Sir William Jenner, Bart., K.C.B.

MEASUREMENT OF LIMBS.—A correspondent of the *Cincinnati Lancet* writes that Dr. Morton has been measuring the limbs of the boys of Girard College. Among 300 he found asymmetry the rule, the difference varying from a fraction of an inch to an inch.—*New York Med. Record*, March 13.

LIME-VAPOUR BATH IN DIPHTHERIA.—Dr. Campbell, of Larre, Kansas, states that he has had uniform success with the lime-vapour bath in the treatment of diphtheritic croup. He puts a piece of unslaked lime into boiling water, and conducts the vapour so that the patient not only inhales it, but is enveloped in it. This method of obtaining the vapour is the only practicable one unless atomisers are used. He believes that the disease has a local origin in the throat, and has found that early local treatment with liquor ferri persulph. will sometimes cut it short.—*New York Med. Record*, March 27.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

T. H. S., Bankside.—Mr. John Simon, Consulting Surgeon to St. Thomas's Hospital, is a Companion of the Bath (C.B.).

J. Picciotto G.—Official statistics show that the proportion of still-born children in Italy is (nominally, at all events) much in excess of that in most other European countries—a circumstance which the authorities attribute to a greater interval being allowed to elapse between the birth and registration in Italy than elsewhere. The treatment of foundlings in Italy is a subject to which public attention has lately been directed, and it is hoped future statistics will show under the head of "nati morti" a more satisfactory state of things.

Evading Excise Medicine Duties.—A French chemist, carrying on business in Wardour-street, Oxford-street, has been fined 40s. by the Marlborough-street police magistrate for selling foreign medicines improperly stamped. The Inland Revenue authorities were the prosecutors.

The Collegial-Triennial Prize.—Dr. G. A. Woods, to whom was adjudicated the above prize for his essay on the "Third, Fourth, and Sixth Nerves, as illustrated by Observation and Experiment in Health, and by reference to the Effects of Injury and Disease," has signified his intention to take the gold medal of fifty guineas, instead of that amount in cash. The value of this medal as an heirloom in his family will be increased by the fact that it is the first occasion on which the "John Hunter" Medal has been accepted.

Bearing-Reins.—The interesting pamphlet on "The Stones of London; or, Macadam *versus* Vestries," is by Mr. Edward Fordham Flower, author of "Bits and Bearing-Reins," who is so well known as the horse's friend.

Edwin O., Suffolk.—The remarkable instance of early fecundity about which you inquire occurred at Rochford, in Essex, and is recorded in the Registrar-General's Annual Report for 1868. The daughter of an agricultural labourer gave birth to a boy before she had attained the age of eleven years. The father of the child was prosecuted and sentenced to imprisonment.

Medical Students and "Home Rulers," Cork.—A medical student in the Queen's College, Cork, has been rusticated for twelve months by the College Council for having got up among the students an address to Mr. Parnell on his return from America.

Strange if True.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—The following extract from a letter I have received from an old friend—in fact, "Your Roving Correspondent"—may interest some of your readers. I am, &c., Robert Sawyer, M.R.C.S.

"It was in vain, my dear Robert, that I attempted to persuade my good friend Dr. Sangrado to allow me to accompany him on his visit to the celebrated hospital of La Perfecion, in the Republic of Amazonia, South America. 'Dear *amigo*,' said the old gentleman, 'you must remember that you are not now in Europe, and that my privileges as Senior Physician to La Perfecion are very limited. I myself,' he continued, 'am only permitted to visit the patients after receiving a special authority from the Lady Superior, and even then my examinations have too often to be made through the keyhole, as no men are admitted into the wards while the intricate operations connected with scientific nursing are being performed. Do not mistake me, signor,' said the venerable physician, 'I make no complaints—I know that it is right that "nursing" should be all in all; and that the mere administration of drugs should be made subservient to the moral system of instruction, which alone can be carried out by trained nurses; but still I confess the "Old Adam" is strong within me, and I *should* like to know whether the patients take the *pulvero de jalapa* I occasionally order, and whether the dose given has produced satisfactory results.' 'But surely,' I interrupted, 'you are permitted to make such investigations as these?' 'Not so,' replied Dr. Sangrado; 'in the first place, the patient may be under restraint for some breach of "the rules." If a woman, she may even have been enjoined silence for twenty-four hours. I have known one such case, which of course proved fatal. You understand, *amigo mio*, that where the patient is forbidden to *answer*, it would be of no use for me to *ask*, for I could not address my question to the "sister" in the ward.' 'And why not?' I thoughtlessly asked. 'Forbid it, Heaven!' exclaimed Dr. Sangrado; 'you know them not! These ladies are saints and angels, raised above humanity by their abnegation of it. How can one ask a saint if twenty grains of *pulvero de jalapa* have been enough or a little too much?' 'But that is hard upon the patients,' I said. 'I do not know,' replied the venerable man; "the new theory is rather confusing. You suppose fever is fever?' he remarked abruptly. 'Certainly,' I said. 'Well,' replied Dr. Sangrado, 'it is and it is not. It seems to me that fever may be a retribution for some breach of the laws of creation, and the sick-bed a sort of reformatory where the "nursing sister" should alone be employed to recall the penitent to a better frame of mind. According to the last pamphlet issued by the Lady Superior, *mind* is as much above *matter*, as *nursing* is above *pulvero de jalapa;* and a medical man may succeed in making his patients sorry, but he can never make them *penitent!* I confess,' said Sangrado, 'I found this doctrine hard at first, but I am getting resigned. I have yielded on many points. I never interfere with the diet now, and I never inquire whether my patients are allowed to remain in bed or not. I may not, as a medical man, approve of a man with a broken leg being obliged to scrub out a ward in order that he may be taught subordination, nor do I consider it professionally right that a woman delirious from erysipelas should be put into solitary confinement for not singing a little hymn kindly composed for her by the Lady Superior; but still I do not venture to insist upon my own opinions. It may be that in time I may even become indifferent about my *pulvero de jalapa*. I will pray to the saints for proper resignation. It matters little,' continued the old gentleman; 'I am the last of my race.' 'Why so?' I asked. 'Because,' he replied, 'there are no "he" medical students admitted to La Perfecion.' 'And why?' I inquired. 'Because,' he answered, 'the young men of the present day are coarse and violent, brutal and rude. They smell of tobacco; they won't call the Lady Superior "mother"; they wear badly fitting boots, and some have no gloves! The last young "he" student actually wanted to use his stethoscope in the old vulgar fashion, and refused to listen to the sounds of the heart through the counterpane! Alas! when I die,' moaned poor Sangrado, 'gentlemen doctors will be no more. Nursing will have exterminated masculine medicine.' 'It will be a bad thing for the patients,' I said. 'I know not,' replied Dr. Sangrado, piously, 'they will go to heaven all the sooner.'"

An Opening!—The island of Sark, wirh a population of nearly six hundred, has no resident surgeon. When medical aid is required, it has to be obtained from Guernsey. The Court of the island, with the view of securing the services of a resident surgeon, has resolved to contribute the sum of £40 annually towards the income a surgeon might derive from his practice.

Surgeon Owen's Work at Cabul.—The following interesting details are given of Surgeon Owen's charitable dispensary in Cabul and its suburbs:—The dispensary was opened on November 14, 1879—immediately after the arrival of the expeditionary force—for the treatment of patients, and from that date up to February 16 last as many as 9658 poor Cabulees were attended at their homes, of whom 2706 were women and 1345 children; while 1305 patients were received inside the walls of the dispensary, of whom 618 were women and 49 children. Mr. Owen seems to have met with almost every variety of disease among the Cabulees, including asthma, bronchitis, and rheumatism. Scurvy was prevalent at all seasons; this is remarkable, considering that throughout the year the food of the Cabulees largely consists of fruit, fresh and dry. Leprosy was very general among the Hazarahs, and eye diseases, small-pox, and scrofula common among all classes; but there were few cases of phthisis. Notwithstanding the aversion most Mohammedans have to undergoing surgical operations of any kind, numerous cases of amputation, lithotomy, and cataract were treated successfully. The number of female cases treated through the agency of the dispensary is a noticable feature, because of the extreme reluctance that Asiatic women, as a rule, have to any intrusion upon their privacy, and to expose their ailments to the Kaffir eye. Sir Frederick Roberts, speaking of Mr. Owen's services, says, "they have contributed in an important degree towards laying the foundation of a good mutual understanding between the Government and the people of Cabul and its vicinity." The Doctor testifies to having received many feeling proofs of gratitude and goodwill. His work at Cabul has undoubtedly been alike most humane and useful.

Patrick.—The new main building of the Coombe Lying-in Hospital, Dublin, was completed through the munificence of Sir A. Guinness, Bart. The institution contains sixty-five beds.

Alleged Improper Medical Treatment.—At the last meeting of the Camberwell Board of Guardians a letter was read from an inmate of the Gordon-road Workhouse, sent to the Guardians by the Local Government Board, which referred to an injury of a serious nature which he (the inmate) had, as he alleged, sustained while stone-breaking. When working in the stone-yard a piece of stone flew into his eye, and he saw the doctor, who said he was only suffering from a cold, and ordered his eye to be bathed. This was done, but as he found no relief he was admitted into the infirmary, where leeches were applied to his eye. This treatment failed. Eventually, without his consent, as he alleges, an operation was performed on the eye, and after remaining in the infirmary he left, with the loss of the sight of one eye, and unable to follow his avocation as a bricklayer. He insists upon not having received proper medical treatment, and claims compensation for the injury he has received. The Guardians have appointed a sub-committee to inquire into the whole case. Eye-guards, it was stated, were provided, and were in the keeping of the superintendent of the yard, but the men refused to wear them.

The Duke of Northumberland and Medical Relief.—His Grace's observations, at the eleventh annual meeting of the Charity Organisation Society, held last week, in reference to medical relief should obtain notice. He sought to give some prominence to the question, because he deemed medical relief, as at present conducted, required great alteration. He said they were continually being called upon to supply new hospitals, but he at the same time admitted the great value of a hospital as a means of administering relief, although their present organisation was very faulty and defective. He thought dispensary arrangements needed revising, so that people could by their own efforts provide against sickness, and urged that the extension of a principle, working in that direction, should occupy the early attention of the Society.

A Fellow, Manchester.—The following Members of the Council of the College of Surgeons are Fellows of the Royal Society, viz.:—Messrs. J. E. Erichsen and Erasmus Wilson, the Vice-Presidents: and Messrs. G. Busk, T. B. Curling, Sir J. Paget, P. G. Hewett, J. Simon, G. M. Humphry, J. Marshall, W. S. Savory, and J. Wood.

Urban and Rural Sanitary Works.—A system of sewerage has just been completed at Settle, Giggleswick, and Langcliffe for the Settle Rural Sanitary Authority.——A new infectious diseases hospital at Biggleswade has been opened. It consists of three blocks of buildings—viz., wards, administrative block, and offices.——An inquiry has been held by a Local Government Board inspector at Chard, Somerset, with reference to an application from the Urban Sanitary Authority for a loan for drainage purposes. There was no objection raised, and the inspector afterwards examined the proposed site of the works.——The Local Government Board has sanctioned street improvements at Cheltenham at a cost of £8000.——The Ulverston Rural Sanitary Authority have carried out works for a water-supply at Swarthmoor, and are about to commence sewerage works at Flookburgh, Roosebeck, and Loppergarth. ——The Tiverton Town Council are about to improve the water-supply of the town at a cost of £3047.——A Local Government Board inquiry has been held at Woodville, Derbyshire, as to an application from the Ashby-de-la-Zouch Rural Sanitary Authority for compulsory powers to acquire land for the proposed sewerage works.——The Basingstoke Urban Sanitary Authority has decided to erect an infectious diseases hospital on the site of the old Rest House and meadow adjoining, at a cost of £1500.—— The Public Health Committee of the Dublin Corporation have approved of plans for a public abattoir to be erected in the North Circular-road. ——A Local Government Board inquiry has been held at Plymouth, in reference to an application from the Town Council for powers to purchase property required for several street improvements.——A new workhouse has just been completed for the South Shields Board of Guardians at a cost of upwards of £13,000.——The Ipswich Town Council have adopted plans for a public mortuary, to be built in the green-yard, on the site of a former county hall.——The Rural Sanitary Authority of Bandon, County Cork, are about to carry out a scheme for supplying water to the town from two sources, namely, at Coolfudda and Callatrim. ——At Mallow, County Limerick, waterworks are being constructed at a cost of £4800.——The Lancaster Town Council have decided to erect a new infectious diseases hospital in the Marsh, and also to supply water from the Borough Works to the parish of Scotforth.——The Urban Sanitary Authority of Salisbury have petitioned the Local Government Board to empower them to form a sewage farm between Salisbury and Bretford, and an official inquiry is progressing on the matter.——The Vestry of Battersea has decided to purchase the Earlsfield Estate, comprising thirty-four acres, as a site for the proposed new cemetery.——A Local Government Board inquiry has been held at Paignton, on an application from the Local Board for sanction to borrow £1900 to purchase, and lay out, The Gores, Holloway-hill, as a public cemetery.——At Penzance a similar official inquiry has taken place respecting an application from the Town Council for a provisional order for compulsory purchase of land for street improvements, and for sanction to borrow £800 for water-supply works, and sewerage.——The City of London Commissioners of Sewers have decided to erect dwellings suitable for the working classes on vacant land in Petticoat-square, and the conditions for letting the tenements are now under consideration.

COMMUNICATIONS have been received from—

Dr. J. W. Longmore, London; The Registrar of Apothecaries' Hall, London; Inspector-General Domville, London; The Secretary of the London Branch of the British Medical Association; The Honorary Secretary of the Medical Society of London; Mr. J. Chatto, London; The Secretary of the Royal Medical and Chirurgical Society; Mr. D. Colquhon, London; The Secretary of the Royal Institution, London; The Honorary Secretary of the Obstetrical Society of London; The Honorary Secretaries of the Harveian Society of London; The Registrar-General of Edinburgh; Mr. E. L. Hussey, Oxford; Dr. William Roberts, Manchester; Dr. J. W. Moore, Dublin; The Honorary Secretaries of the Epidemiological Society of London; The Directors of the Anthropological Institute of Great Britain and Ireland, London; Mr. Brinsley Nicholson, London; Mr. Robert Harrup, Calcutta; The Secretary of the Statistical Society of London; Mr. H. Cliff, jun., London; The Secretary of the Royal Medical Benevolent College, Epsom.

BOOKS, ETC., RECEIVED—

Deutsches Archiv für Klinische Medicin, von Prof. Dr. Ch. Baümler—Bristol, Past and Present—The Pathology and Treatment of Venereal Diseases, by Freeman J. Bumstead, M.D., LL.D., and Robert W. Taylor, A.M., M.D.—The People's Contribution Fund in Aid of University College Hospital—Des Divers Modes de Terminaison Grosseses Extra-Utérines, par Benjamin Deschamps—Du Traitement de la Pneumonie Aiguë, par le Dr. Victor Hanot—Des Troubles Oculaires, par le Dr. Albert Robin—Les Pneumonies Chroniques, par le Dr. J. Regimbeau.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Centralblatt für die Medicinischen Wissenschaften—Nature—Revue Médicale—Occasional Notes—Gazette Hebdomadaire—Louisville Medical News—Therapeutic Gazette—Practitioner—Journal of Anatomy and Physiology—Revue d'Hygiène—Revue des Sciences Médicales—Monthly Review of Dental Surgery—American Bookseller—Detroit Lancet—Medical Record—New York Medical Journal—American Journal of the Medical Sciences—Washington National Board of Health—Bulletin—Obstetrical Journal—Paper and Print—Boston Medical and Surgical Journal—El Siglo Medico.

APPOINTMENTS FOR THE WEEK.

April 24. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

Royal Institution, 3 p.m. Mr. James Sully, "Art and Vision."

26. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. Dr. T. Stretch Dowse, "On Neurasthenia, or Nervous Exhaustion, and its Treatment." Mr. D. H. Goodsall, "On a Case of Popliteal Aneurism Cured by Esmarch's Bandage."

27. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Royal Institution, 3 p.m. Mr. R. H. Scott, "Wind and Weather."

Anthropological Institute, 8 p.m. Messrs. F. G. Hilton Price and J. E. Price, "Further Notes on the Romano-British Cemetery at Seaford, Sussex." Major-General A. Lane Fox will exhibit a series of Plans and Relics from Mount Caburn."

Royal Medical and Chirurgical Society, 8½ p.m. Mr. Alfred Willett and Mr. W. J. Walsham, "On Dissection of the Parts, and Remarks on the Defects in Development producing Congenital Malformation of the Spinal Column, Bony Thorax, and Left Scapular Arch." Mr. Frederick James Gant, "On Compound Fracture of the Femur twenty years after Excision of the Knee-Joint for Disease, transversely one inch above the bony union."

28. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Lister), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.; National Orthopædic, Great Portland-street, 10 a.m.

29. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

Royal Institution, 3 p.m. Prof. Tyndall, "Light as a Mode of Motion: Theories of Light and Colours."

Epidemiological Society (University College), 8 p.m. Special Meeting: Surgeon-General C. A. Gordon, "On Certain Views regarding Fever in India."

30. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

Royal Institution, 8 p.m. Mr. Spottiswoode, "Electricity in Transitu.

VITAL STATISTICS OF LONDON.

Week ending Saturday, April 17, 1880.

BIRTHS.

Births of Boys, 1329; Girls, 1327; Total, 2656.
Corrected average in the 10 years 1870-79, 2592·7.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	787	732	1519
Average of the ten years 1870-79, corrected to increased population	874·3	831·1	1705·4
Deaths of people aged 80 and upwards ...	...	...	64

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa
West	561359	...	7	4	3	15	...	2	...	2
North ...	751729	4	3	13	1	26	...	2	...	3
Central ...	334369	...	1	2	...	13	...	1	...	1
East	639111	1	4	5	...	23	...	1	...	2
South	967692	4	7	23	4	34	2	7	1	3
Total	3254260	9	22	47	8	111	2	13	1	11

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·651 in.
Mean temperature	46·4°
Highest point of thermometer	63·4°
Lowest point of thermometer	35·8°
Mean dew-point temperature	40·9°
General direction of wind	N.E., S.E., & S.W.
Whole amount of rain in the week	0·98 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, April 17, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1880.*	Persons to an Acre. (1880.)	Births Registered during the week ending April 17.	Deaths Registered during the week ending April 17.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Centimetres.
London	3664149	48·6	2656	1519	63·4	35·8	46·4	8·00	0·98	2·49
Brighton	107321	45·6	72	49	60·0	37·1	46·2	7·89	0·61	1·55
Portsmouth ...	134224	29·9	71	42	...	...	...	...	...	...
Norwich	85827	11·5	68	47	62·0	39·0	45·7	7·61	0·43	1·09
Plymouth	74993	53·8	43	43	56·5	39·5	45·8	7·67	0·33	0·84
Bristol	213536	48·0	151	80	56·0	35·5	43·5	6·39	0·72	1·83
Wolverhampton ...	75970	22·4	61	33	52·5	32·0	40·5	4·72	0·53	1·35
Birmingham ...	394738	47·0	316	177	...	...	...	...	...	...
Leicester	129912	40·6	86	57	62·5	34·0	44·1	6·73	0·35	0·89
Nottingham ...	173627	17·4	132	95	56·5	35·3	42·8	6·00	0·42	1·07
Liverpool	544056	104·4	416	289	59·1	36·9	43·9	6·61	0·22	0·55
Manchester ...	363130	84·6	268	186	...	...	...	...	...	...
Salford	185786	35·9	144	81	...	...	...	...	...	...
Oldham	115413	24·7	88	61	...	...	...	...	...	...
Bradford	197196	27·3	104	85	53·5	33·0	42·2	5·67	0·99	2·51
Leeds	318929	14·8	257	101	54·0	35·0	42·8	6·00	0·84	2·13
Sheffield	304938	15·5	213	131	62·0	33·0	42·8	6·00	0·90	2·29
Hull	149627	41·2	123	56	64·0	34·0	44·9	7·17	0·42	1·07
Sunderland ...	116730	42·2	98	53	62·0	37·0	45·7	7·61	0·71	1·80
Newcastle-on-Tyne	149366	27·8	91	82	...	...	...	...	...	...
Edinburgh	229839	54·8	161	124	60·0	36·2	44·5	6·95	0·93	2·36
Glasgow	589598	97·7	390	267	53·0	34·5	44·2	6·78	0·33	0·84
Dublin	314666	31·3	245	250	51·8	33·7	43·3	6·28	0·96	2·44
Total of 23 Towns in United Kingdom	8633571	39·2	6254	3908	64·0	32·0	44·1	6·73	0·63	1·60

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·65 in. The highest reading was 29·93 in. at the beginning of the week, and the lowest 29·47 in. both on Wednesday and Thursday afternoons.

* The figures for the English and Scottish towns (except for Nottingham, Salford, and Oldham) are the numbers enumerated in April, 1871, raised to the middle of 1880 by the addition of nine years and a quarter's increase, calculated at the rate which prevailed between 1861 and 1871. Revised estimates have been adopted for Nottingham, Salford, and Oldham, based upon special returns of inhabited houses existing within those boroughs. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

THE LUMLEIAN LECTURES

ON THE

DIGESTIVE FERMENTS AND THE PREPARATION AND USE OF ARTIFICIALLY DIGESTED FOOD.

Delivered before the Royal College of Physicians.

By WILLIAM ROBERTS, M.D., F.R.C.P., F.R.S.,
Physician to the Manchester Royal Infirmary;
Professor of Clinical Medicine to the Owens College.

Lecture II.—Part I.

Pepsin and Trypsin—Digestion of Proteids.

Various kinds of albuminous or proteid substances are used by mankind as food. The most important of these are muscular flesh, the casein of milk, and egg-albumen, from the animal kingdom; and gluten, albumen, and legumin, from the vegetable kingdom.

Proteids are attacked by the digestive ferments at two points in the alimentary canal—by pepsin in the stomach, and by trypsin in the small intestine. Between these two acts of digestion there is a complete break in the duodenum, owing to the abrupt change of reaction from acid to alkaline which occurs at that point.

Gastric digestion is, in all creatures, an essentially acid digestion; but the most varied opinions have been entertained as to the nature of the acid. It has been supposed in turn to be hydrochloric acid, lactic acid, acid phosphate of lime, butyric, and even acetic acid. Much of this confusion has arisen from not distinguishing between the acid of pure gastric juice as secreted into an empty stomach, and the acid of the gastric contents during the digestion of a meal. A good deal of light has been thrown on this subject by the recent researches of C. Richet.(a) This observer found himself in exceptionally advantageous circumstances for the study of the gastric juice. He had under observation a young man on whom Verneuil had successfully performed the operation of gastrotomy for the relief of impermeable stricture of the œsophagus, the result of swallowing inadvertently a quantity of caustic potash. The complete occlusion of the œsophagus enabled Richet to obtain and examine the gastric juice in a pure state, uncontaminated with saliva. All food had to be administered through the fistulous opening left after recovery, and the observer could at any moment—as in the famous case of Alexis St. Martin—withdraw portions of the gastric contents for examination. Richet also took advantage of the new method of separating the various organic and mineral acids from one another, made public by Berthelot in 1872.(b)

Berthelot had found that, if you shook up an aqueous solution of any acid with ether, and then allowed the two fluids to separate, a part of the acid passed into the ether, and that the remainder clung to the water, and that the ratio between these two parts was a constant quantity. He called this ratio the *coefficient of partage*, and found that its value was a fixed characteristic for each particular acid. Solutions of the mineral acids were found to yield nothing, or almost nothing, to ether when agitated with it; but organic acids were found to pass into the ether in considerable, though very variable quantities—the proportion varying in a constant ratio according to the nature of the acid.

Testing pure gastric juice, uncontaminated with food or saliva, by this method, Richet found that almost all the acid was retained by the water, and that only a small proportion—about one in twenty-two—passed into the ether. This showed that the acid of pure gastric juice was almost entirely a mineral acid, with only a minute admixture of organic acid. The organic acid (tested by the same method) exhibited a coefficient of partage closely corresponding with that of sarcolactic acid. The nature of the mineral acid was determined by a method similar to that employed by C. Schmidt, and yielded the same result—namely, undoubted evidence that the mineral acid of pure gastric juice was hydrochloric acid. But Richet found that this mineral acid did not behave in the presence of salts of the organic acids quite in the same way as free hydrochloric acid does. The observations of Berthelot had shown that when free hydrochloric acid is added to a solution of acetate of soda, or other similar organic salt, the mineral acid attaches the base entirely to itself, and throws the whole of the organic acid free into solution—so that the mixture when tested by the method of coefficient of partage behaves exactly like an unmixed solution of the organic acid. When pure gastric juice was put to this test, it was found that although it liberated the organic acid largely, it did not do so to the same extent, by a good deal, as if the mineral acid contained in it had been entirely free. It behaved, rather, as hydrochloric acid does when united with a feeble organic base, such as leucin or peptone—and, on the ground of what appear to be very careful experiments, Richet came to the conclusion that this feeble base was probably leucin, derived from the gastric mucus, and that the acid of pure uncontaminated gastric juice was hydrochloric acid in loose combination with leucin.

Richet next proceeded to examine the free acid actually existing in the stomach during the digestion of a meal in his patient with gastric fistula. He found, as might have been expected, that this differed from the acid of pure unmixed gastric juice—in this respect, namely, that it contained a very much larger proportion of organic acids, in comparison to the mineral acid, than pure gastric juice. It was evident that the mineral acid had to a large extent seized upon the bases of the acetates, malates, lactates, butyrates, and other organic salts always present in the food, and had set free their organic acids. The real work of digestion, then, so far as the acid constituent is concerned therein, is largely performed by various organic acids thus set free from the articles of food which are undergoing digestion.

Richet found that the acidity of the contents of the stomach during digestion, although it varied through considerable limits, had a marked tendency to maintain the normal average. If acid or alkali was added to the digesting mass the mean was presently restored automatically—the stomach in the former case ceasing to secrete acid, and in the latter case secreting an increased quantity of acid.

The Effect of Gastric Juice on the Salivary and Pancreatic Ferments.

The observations of Berthelot on the power of a mineral acid to set free the acids of organic salts, and to take their place with the bases; and the further observations of Richet, showing that the acids actually free in the gastric contents during digestion were organic acids, have led to the re-examination of a point of some importance, namely, as to whether the salivary and more especially the pancreatic ferments were or were not destroyed by the acid contents of the stomach. The matter has a practical interest in this way. If the gastric acid destroys these ferments it is evidently useless to administer pancreatic preparations by the mouth during digestion, because they would be rendered inert by the acid contents of the stomach. On the other hand, if they are not destroyed in passing through the stomach, but merely lie dormant and recover their activity in the alkaline medium of the small intestine, then we can administer pancreatic preparations during digestion with every prospect of their passing uninjured through the pylorus and proving useful in assisting digestion in the small intestine.

A series of experiments bearing on this question were submitted by T. Defresne to the Académie de Médecine and the Académie des Sciences towards the close of last year, and have attracted some attention. On the ground of these experiments Defresne arrived at the following conclusions—namely, that saliva continued its action on starch in the stomach without interruption; that the pancreatic ferments in like manner preserved their activity in the presence of the gastric acid; that the acids of the chyme, being organic acids, did not really destroy these ferments, but merely reduced them to a state of temporary inertness; so that when the acidity of the chyme was neutralised in the duodenum, they recovered their powers and exhibited undiminished activity both on starch and proteids.

(a) "Du Suc Gastrique," by Ch. Richet. Paris, 1878.
(b) *Ann. de Chimie et de Physique*, 4ème serie, t. xxvi., page 396.

As the question had a direct bearing on the medicina administration of pancreatic preparations, and indirectly on the administration of malt-diastase and malt-extract, I thought it desirable to repeat some of Defresne's experiments, and to put the question raised by these experiments to the test in other ways.

One of Defresne's (apparently) most convincing experiments was the following, which I give nearly in the words of the abstract of the paper published in the *Proceedings of the Académie de Médecine* for November 4, 1879. When twenty grams of dilute hydrochloric acid, having twice the acidity of the normal chyme, are mixed with twenty grams of egg-albumen, what follows? The acidity of the medium is no longer due to free hydrochloric acid, but to the lactic and phosphoric acids of the white of egg which have been set free. In presence of these acids pancreatine may be digested for two hours in the warm chamber with impunity. And if, at the end of this period, the acidity of the mixture be neutralised, digestion is accelerated and the pancreatine peptonises thirty-eight times its weight of albumen.

I repeated this experiment in the following manner:—Forty grams of chopped boiled white of egg were mixed with forty cubic centimeters of dilute hydrochloric acid of the strength of 4 per 1000. This mixture was subjected to a preliminary digestion of two hours in the warm chamber at 40° C. The object of this preliminary digestion was to allow the hydrochloric acid a sufficient time to seize on the bases, and to set free the organic acids of the white of egg. At the end of this time, five cubic centimeters of an active extract of pancreas were added to the mixture. A second experiment was arranged in exactly the same way, except that filtered saliva was substituted for extract of pancreas. The mixtures were kept in the warm chamber for a further period of one hour, and were then filtered and carefully neutralised. On testing the neutralised filtrates, I obtained approximatively the same results as Defresne. The diastatic and proteolytic ferments of the pancreatic extract were found active, but not so active by a good deal as if the extract had been diluted to the same extent with simple water. In the second experiment with the filtered saliva, the ptyalin had preserved its activity quite unimpaired.

These experiments, however, involve a fallacy which vitiates the deductions intended to be drawn from them. White of egg has a highly alkaline reaction, and although the acid used in the experiment possessed double the strength of the normal gastric juice, it was found that the mixtures, at the end of the two hours' preliminary digestion, had only a comparatively feeble acidity—in fact, only one-seventh of the normal acidity of the gastric contents. It has long been known that the salivary and pancreatic ferments are able to resist a feeble acidity, but the question really at issue is—Can these ferments resist the average acidity of the contents of the stomach, when, moreover, this acidity is rendered still more destructive to them by the presence of pepsin?

I tested the question in this way. A distinction is drawn, and rightly, between acidity due to free hydrochloric acid, and a similar degree of acidity due to an organic acid. Now, lactic acid is a typical organic acid, and it is also an acid which is often, if not always, present in the contents of the stomach during digestion. I prepared a solution of lactic acid corresponding in saturating power to the normal gastric acid (2 per 1000 HCl). To fifty cubic centimeters of this dilute lactic acid I added five cubic centimeters of a solution of pepsin, and five cubic centimeters of an active extract of pancreas. I prepared a second similar experiment, but substituted filtered saliva for pancreatic extract. The mixtures were then placed in the warm chamber for one hour. At the end of this period the solutions were exactly neutralised and tested. They were both found to be absolutely inert. Not a vestige of amylolytic nor proteolytic power had escaped destruction.

I had an opportunity of trying the same question in a still more satisfactory way. While I was examining the throat of a patient suffering from an ailment which did not affect his general health, a portion of the contents of the stomach was ejected, and fortunately caught in a clean vessel. This was immediately filtered, and about ten cubic centimeters of clear acid solution were obtained. The period of digestion was three hours after breakfast. One half of this was devoted to testing its saturating power. It was found to possess an acidity very nearly corresponding with that of normal chyme. To the remaining portion five drops of extract of pancreas and five drops of filtered saliva were added, and the mixture was placed in the warm chamber for one hour. At the end of this time it was exactly neutralised, and divided into two equal portions. One portion was tested with a drop of starch mucilage, and found to be absolutely devoid of amylolytic power. The other portion was added to an equal volume of milk rendered slightly alkaline with bicarbonate of soda, and was then placed in the warm chamber. Not the slightest digestive action was produced on the milk in twelve hours.

I may mention that in the above experiments I used milk as the test of proteolytic activity. I had become thoroughly familiar with the behaviour of milk with pancreatic preparations during a long course of observations, and was therefore able to detect the slightest signs of pancreatic action.

With this evidence before me, I am unable to accept the conclusions of Defresne and others in Paris, who allege that saliva and pancreatic preparations can resist the normal acidity of the stomach in full digestion; and who recommend the administration by the mouth of pancreatic preparations during the period of chymification. I will in my next lecture point out the time and the method in which these preparations may, I believe, be administered by the mouth with sure prospect of success.

Digestive Proteolysis.

The changes undergone by albuminoid substances in digestion are still very imperfectly understood. It is, however, known that the chief end-product of the transformation is peptone. It is also known that between any native proteid—egg-albumen, muscle-fibrine, casein, or legumin—and the end-product peptone there are intermediate grades and bye-products, which have hitherto proved difficult to define and isolate. The constitution of the proteid molecule is still unknown to chemists. That it is a highly complex aggregation is certain; and it can scarcely be doubted that the way to a better knowledge of its constitution lies in a persevering study of the action on it of the digestive ferments. It has been already seen that in the case of starch the action of diastase furnished the key to the constitution of the starch-molecule; and, similarly, it is not unreasonable to expect that the mystery of the proteid molecule will be finally solved by a study of the action on it of pepsin and trypsin. Attention has hitherto been too exclusively directed to peptic digestion, which is complicated by the interaction of an acid. Pancreatic digestion is, in this respect, a simpler process—inasmuch as it requires the interference neither of an acid nor an alkali, but is a reaction, pure and simple, between the ferment and the proteid. This, however, is a question of the future.

Characters of Peptones.—The end-product peptone has been fairly isolated, and its characteristics defined. If the filtered product of a pancreatic digestion of egg-albumen be evaporated to dryness in a watch-glass at a temperature of 104° Fahr. (40° C.), there remains a glassy, straw-coloured residue resembling dried gum. With the point of a penknife this can be chipped off in shining scales, which may be easily reduced to a fine whitish powder: this is nearly pure peptone. This substance is extremely soluble in water; and its solutions, even when highly concentrated by evaporation, betray no jellying and no viscosity, but continue diffluent almost to the moment of desiccation; only just before drying up do they assume a slightly syrupy consistence. When the latter point is approached the solution deposits beautiful white crystalline sheaves of tyrosin and spheres of leucin. From the constancy with which these crystalline bodies make their appearance in pancreatic digestion it may be inferred that they constitute an essential portion of the final products of the transformation.

The reactions of peptone are mostly of a negative character. Its solutions give no precipitation with nitric acid, nor with boiling, nor with ferrocyanide of potassium and acetic acid. The behaviour of peptone with alcohol is peculiar. When a strong peptone solution is dropped into absolute alcohol, the peptone is precipitated as a white sediment, but it is not truly coagulated into an insoluble modification, as all the other proteids are, for when the alcohol is removed the deposit is found to have preserved its solubility in water—even after prolonged contact with the alcohol. Solutions of peptone are precipitated by those metallic salts which throw down other proteids, also by tannin when the solutions are neutral. When the solu-

tions are rendered alkaline, the cupro-potassic test (Fehling's solution) added in very small quantity produces a rose-red colouration, whereas other proteids produce a violet tint. Physiologically, by far the most important reactions of peptone are its extreme solubility in water and its diffusibility through organic membranes. With regard to the latter point, contradictory statements have been made by different investigators. Otto Funke rated the diffusibility of peptone through the membrane of the smaller intestine higher than that of common salt. On the other hand, V. Wittich concluded that peptones did not pass through parchment paper more rapidly than unaltered albumen. My own observations support the view that peptone is incomparably more diffusible through parchment paper than the native proteids. In the case of milk, the effect of digestion is very marked in regard to its behaviour in the dialyser. When milk was dialysed for forty-eight hours into twice its volume of water, not a trace of proteid matter could be detected in the diffusate; but when milk had been previously digested for a couple of hours with pancreatic extract, an abundant reaction with tannin and Fehling's solution was obtained after dialysing it for eight hours.

My results with egg-albumen were equally striking. I prepared a solution by agitating white of egg with nine times its bulk of water, and straining the product through muslin. When this solution was dialysed into twice its volume of water for thirty-two hours it yielded absolutely no reaction with tannin nor with the cupro-potassic test. But when the same solution was previously digested, either with pepsin and acid or with pancreatic extract, and then dialysed, it gave in five hours a slight but distinct reaction both with tannin and with Fehling's solution, and in sixteen hours a most abundant reaction.

The theoretical views held by physiologists in regard to the intimate nature of the transformation undergone by proteids in the presence of pepsin and trypsin are still unsettled, but recent opinions converge towards the idea that the process is, in the main, one of progressive deduplication with hydration, similar in type to the transformation of starch by diastase. This view receives a positive support from the recent analyses of Henninger. By operating on highly purified albumen, fibrin, and casein, Henninger(c) succeeded in obtaining peptones in a state of great purity. An analysis of peptones so obtained indicated that they contained less carbon and nitrogen, and proportionally more hydrogen, than their original proteids. The differences were, it is true, small, but they pointed distinctly in the direction of the conclusion that there was a fixation of the elements of water by the proteid in the course of its transformation into peptone.

Henninger also believes that he has succeeded in reversing the process, and in reproducing an albuminous substance from peptone by operating on it with dehydrating agencies. He found that when fibrin-peptone was heated with anhydrous acetic acid at 80° C., or was maintained for an hour at the temperature of 160° to 180° C., it yielded a body which agreed closely in its reactions with syntonin.

The intermediate products which are generated in the course of proteid digestion, and stand between the original proteid and the end-product peptone, are very imperfectly understood. The laborious researches of Meissner and Kühne have shown that several such intermediate bodies are produced, but these have not yet been adequately isolated and defined.

Comparison of the Action of Pepsin and Trypsin.

The action of pepsin and trypsin, although similar in the main results, is certainly not identical. There is a markedly larger production of leucin and tyrosin in tryptic than in peptic digestion. Moreover, the action of the two ferments on different proteids appears to vary both in character and in energy. Milk is much more readily digested by pancreatic extract than by artificial gastric juice; but in the case of egg-albumen the advantage lies decidedly with the gastric juice. The study of the digestion of egg-albumen by the two methods yielded some interesting results. I employed for this purpose a dilution of egg-albumen with water, in the proportion of one in ten. This remains uncoagulated after being boiled in the water-bath, and furnishes a favourable medium for studying the digestion of albumen—much more favourable than the chopped boiled white of egg usually employed. It permits the ferment to be at once brought into uniform and intimate contact with the particles of the albumen, thus obviating the irregularity and want of constancy which necessarily attends the operation of a solvent acting on solid pieces of variable size, which can only be attacked progressively from their surfaces. In the raw state this solution is digested with extreme slowness by artificial gastric juice, and pancreatic extract is nearly inert on it; but after being boiled it is attacked with energy by both the gastric and the pancreatic ferments. When the boiled solution was treated, in the warm chamber, with pepsin and hydrochloric acid, the transformation of the albumen went on rapidly and without interruption to its close. In the earlier periods of the action the mixture gave a dense precipitate with nitric acid and with ferrocyanide of potassium, but this precipitation became progressively less and less pronounced, until at the end of two or three hours these reagents only produced a slight haze. The albumen was now completely digested, or at least as nearly so as could be reached, for this remnant of a reaction persisted even after a further digestion of twenty-four hours.

When the same solution was treated with pancreatic extract the progress of effect was different. For an hour or two (the time varying with the quantity of extract added) there was no apparent change; but at the end of this time the mixture lost its diffluent condition, and became converted into a gelatinous mass, exactly resembling a thin starchy jelly. By-and-by the gelatinous matter broke up into little masses, which floated in a transparent liquid. At this point the action seemed to be arrested. The floating masses of jelly remained almost undiminished in quantity after twenty-four and even forty-eight hours. When the mixture was filtered, the liquid portions came through perfectly transparent, and the jelly-like matter was left in the filter. The filtrate was found to be a rich and very pure solution of peptone—uncontaminated with any undigested or half-digested albumen. The jelly-like matter was found to be insoluble in water, hot or cold, but it dissolved readily in acids, and was rapidly digested by pepsin and hydrochloric acid.

If a large amount of pancreatic extract was used, a considerable proportion of the jelly-like matter was slowly dissolved; but the main result was always the same—the pancreatic ferment was only able to convert a part of the albumen into peptone, whereas, the gastric ferment converted the entire quantity, with the exception of an insignificant residuum.(d)

In the case of milk, the relation of the two ferments is reversed. Tryptic digestion of milk is rapid, and leaves only a very slight residue; whereas peptic digestion is slow, and leaves a large residue. I have some further observations to make on the digestion of milk by pancreatic extract, but it will be more convenient to take up the subject when I come to speak of the use of this ferment for the preparation of artificially digested food.

Peptogens.

I may here advert to a singular view advanced by Schiff in regard to the production and secretion of pepsin and trypsin. Schiff found that when an insoluble aliment such as white of egg (or fibrin, or meat which had been deprived of its soluble portions) was introduced into the stomach of a fasting animal, no pepsin was secreted, and the albumen remained undigested; but if with the albumen certain soluble aliments were introduced into the stomach, then pepsin was produced, and digestion immediately began.

To these substances, which had the power of provoking the formation and secretion of pepsin, Schiff gave the name of *peptogens*. Among the most effective peptogens were found to be solutions of dextrine, extract of meat (or soup), infusion of green peas, bread (which contains dextrine), gelatin, and peptones. On the other hand, solutions of grape-sugar, soluble starch, fat emulsion, or gum had no peptogenic effect; and milk and coffee had not much. Schiff further found that peptogenic substances were just as effective when they were injected into the blood, or into the cellular tissue, or introduced as enemata into the rectum, as when

(c) A. Henninger, "De la Nature et du Rôle Physiologique des Peptones." Paris, 1878.

(d) Most observers have noticed the occurrence of this indigestible residuum (named *Dyspeptone* by Meissner) in the artificial gastric digestion of proteids. I have noticed the same in the digestion of milk by pancreatic extract.

they were introduced directly into the stomach. On the other hand, when peptogens were injected into the small intestine their influence was not observed; their effect seemed to be annulled by some action of the mesenteric glands, or by some change induced in them in their passage along the thoracic duct.

On the ground of these experiments—and they were numerous and oft repeated, and gave constant and decisive results—he concluded that the absorption into the blood of these soluble aliments was a necessary preliminary of proteid digestion; that no pepsin or trypsin was secreted unless these substances existed beforehand in the blood. The first act, according to Schiff, of gastric digestion was the absorption from the constituents of a meal of these soluble peptogens by the veins of the stomach. On this followed immediately the secretion of pepsin and the commencement of digestion proper.(e)

These views and experiments of Schiff have not been allowed to pass without challenge, but they have not yet been overturned. If they should be substantiated they will give, curiously enough, a scientific sanction to the prevailing custom of commencing dinner with soup.

ORIGINAL COMMUNICATIONS.

SPORADIC CRETINISM AND MYXŒDEMA.

By JAMES F. GOODHART, M.D.,
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In a communication to the Royal Medico-Chirurgical Society Sir William Gull has described a cretinoid state supervening in women in adult life; and Dr. Ord attributes the symptoms in these and other additional cases which have come under his notice to a morbid condition of the tissues, for which he proposes the term "myxœdema." The clinical picture portrayed in these cases is very accurate, and is probably fresh in the minds of most of us; and the account given by Dr. Ord of the chemical and microscopical examination of the diseased tissues leaves nothing to be desired. It is not with these points that I shall here concern myself. But it will be remembered that Dr. Ord has advanced an hypothesis of very ingenious nature to explain the concurrence of the myxœdema and the cerebral indolence which betokens or simulates cretinism. I will not go at length into the description of this view, because I think its essentials are sufficiently stated when I say that it is considered that the myxœdematous tissue pads round the peripheral nerves and touch corpuscles, and that, thus deprived of its healthy stimulus, the brain fails in nutrition, and more or less of mental hebetude results. It is also suggested that myxœdema is occasionally present in infancy; and when so, cretinism is caused by the direct prevention of the development of the brain, which is deprived of one large channel of education by this hindrance to the reception and passage of sensory impressions. Is this view tenable? I think not; but as it is a question well worth discussion and, if possible, elucidation by additional facts, I propose to consider it in the light which the following case appears to me to throw upon it. Some may think that if I admit, as I do, the existence of the disease, opinions as to the mode of production of its symptoms are but of small importance. I hold, on the contrary, that they are of the first importance, for it will be seen by what I have to say that they involve no less a question than the very nature of the disease.

A female child, aged four years, was brought to my out-patients at the Evelina Hospital. She was the child of a sergeant in the Royal Artillery. The parents were not blood-relations, and five other children had been born to them which were all quite healthy—one, a baby of sixteen months old, could already run about. The mother had a good period of gestation with the patient and a natural confinement, and her husband is said to have been a perfectly healthy man. Both parents had been long in India, but not for the last eleven years, and the child, as I have said, was but four years of age. It was brought for stomatitis more particularly, but its appearance at once attracted attention, for it had a peculiar yellow pallor suggestive of chronic splenic enlargement, although in reality no such disease was present. The abdominal viscera, in short, were normal. The head was large and of peculiar shape, the forehead being small, bulging up, however, locally in each lateral frontal region, and also just in front of the anterior fontanelle. The hinder part of the head, again, was small. The features were clumsy-looking and thick; the face round and expressionless. She could not talk, but made noises of an unintelligible kind, though sight and hearing were perfect. She was unable to walk, tumbling over as soon as she was put upon her legs. The tibiæ were bowed outwards, though without any distinct enlargement of the ends of the bones. There was an umbilical hernia. The palate was much arched. The teeth were backward, only the two central incisors above and below being cut, and one double tooth in the left upper jaw; the corresponding one on the right side was appearing. The condition of the tongue was remarkable. It was apparently too large for the mouth, and was kept constantly protruded between the teeth, though, except for unusual size, it was normal. The body was well nourished, but very small; and my notes go on to say, "The good state of nutrition may perhaps be due to an excess of subcutaneous fat, but there is no œdema. There is a well-marked lump of fat in each supra-clavicular space. No goître; the existence even of any thyroid is doubtful. There is no evidence of any enlargement of the mediastinal glands." There was considerable enlargement of the thenar and hypothenar eminences in each hand, giving to each a peculiarly broad and deformed appearance; the enlargement seeming to be due to muscular hypertrophy, and not to excess of fat. The muscles of the thighs were well developed, but not the calves. The fundus of the eye was normal. Mentally, it was a dull child; that is to say, it was very quiet, taking but little notice of surrounding objects, though it recognised its parents and any glittering objects held up before it.

The appearances described seem to me to be sufficient to justify a diagnosis of sporadic cretinism, the essential features of this disease being, as I understand it, an ill-developed brain and an *irregular* growth or development of the body—some parts being overgrown, some parts undergrown. Witness the fat-pads in the neck, the atrophied thymus, the backward teeth, the small head, the deficient intelligence—at four years of age this child could neither talk nor take notice of surrounding objects of attraction. Witness, too, the development of the body: its small size; its muscles so badly grown that the child could not walk. And yet in some parts there was an erratic luxuriance of growth, for the tongue was much too large, and certain other muscles also. The usual excess of fat in the triangular spaces of the neck I have already mentioned; and perhaps it may be said that there was some excess of fat over the body generally. I make special mention of the questionable existence of this latter condition, because it and the peculiar yellow pallor, which was unusually pronounced in this child, are points in which the case more or less resembles the myxœdema of adult life, and would afford some ground, no doubt, for considering it as a case in support of Dr. Ord's views.

I would, however, not insist on these conditions, because the excess of fat in the subcutaneous tissue was at best but doubtful, and I should not have described the child as more than well nourished had I not had Dr. Ord's observations in my mind at the time the case came under my notice. The *irregular* development of the body was the feature of the case which fastened itself on my attention—the large tongue, the bundles of muscle on the thenar and hypothenar eminences, and the localised development of fat. And attempting to fit Dr. Ord's hypothesis to the conditions associated in this case, we should have to substitute for the generalised myxœdema a *localised* hypertrophy, and, *mutatis mutandis*, the argument would stand thus: the brain is developed badly, and the cretin condition induced, because the tongue is padded with an excess of muscle and the connective tissue in one or two places has become hypertrophied. Obviously, if it is correct to consider the case to be one of local and not general padding, a result which in the one case is conceivable, in the other is attributed to quite an inadequate cause. In failing to stand such a test as this—which is, I think, quite a fair and proper one,—the force of Dr. Ord's contention is materially weakened. I may even

(e) See Schiff's "Leçons sur la Physiologie de la Digestion," vol. ii., page 200 *et seq.* Paris, 1867.

illustrate my position by another case. A boy was admitted into Guy's Hospital during the last autumn, and, in the absence of Dr. Pavy from town, came temporarily under my care, his only complaint being that at sixteen years of age he weighed sixteen stones. I have not the notes by me at the moment, and I will not therefore vouch for the exact weight or age, but the figures I have given are substantially accurate. The boy was of enormous size, and would have been very remunerative to an enterprising showman at a country fair. Now, this excessive size was due almost entirely to excessive development of fat. But on stripping him for examination we found that his external genitals were very small and ill-developed, and I pointed out to the students at the time that the two conditions—arrested development and excessive development—were in some way supplemental to each other; and the case, as bearing upon Dr. Ord's opinions concerning myxœdema, seems to me to be adverse to them. I would call this case "genital cretinism," because whereas, in cretinism proper, brain and connective tissue are associated, in this case the genital organs were substituted for the brain. And again, applying to it the hypothesis I am combating, it would be contended that, because this boy's peripheral nerves were padded, therefore his genital organs had not developed properly—a view which in this case, though it is possibly conceivable, is not, I think, very probable. It is, I believe, putting the cart before the horse.

The explanation of these anomalies of development and growth is, I think, to be found in certain adapted conditions, of so frequent occurrence and of so wide an application in the life-history of all tissue-growths, whether they be natural or morbid, as almost to merit formulation in a law. I will state the proposition thus:—In the development and growth of all tissues, particularly of complex organisms, there is a correlated harmony of the several parts of the organism. The more complex the organism, the more difficult it becomes to show its existence, for the correlated activities of the various regions or organs are so much distributed, and take place under conditions which defy adequate investigation. Still, analogical reasons are many which attest the truth of this; and cases are by no means wanting where vital actions, if not wholly, at any rate in part, admit of such an explanation. Our tissues are educated, so to speak, upon a balance-of-power principle. But if one part grows to excess, some other part will compensate by its want of development. And very nice is the instinct of equal adjustment at first starting, though an inherited rapacity may ultimately lead some tissues to lose sight of its utility. I might illustrate what I mean in several ways. The horticulturist adopts the principle in cultivating his plants for his special needs and the requirements of the community. He lops here or prunes there, and so forth, to make other parts of his plant grow more luxuriantly. The surgeon, though by no means making it a means to such an end, is yet apt to find that if any large part of the body be removed—an entire limb, so to say,—the remainder of the body becomes unduly fat. Pushing the same law into the domain of pathology, I see it illustrated not only in cretinism, but in such a disease as pseudo-hypertrophic paralysis of children; while it also finds expression very generally (although it is unnecessary to develope this, as I have already done so elsewhere) in the regulation of the development of tumours. I might also allude to another group of cases which require explanation, and which admit of such an one as I have given. We must all have noticed the tendency that exists in children who lose their sight in quite early childhood—that is, in children two, three, and four years of age—from cerebellar tumours and cysts, to grow inordinately fat. Now, it surely cannot be that such children are blind because they are fat; they must therefore be fat because they are blind, or the amaurosis and obesity are related to some third condition as their cause—the cerebellar tumour, for instance,—but have no relationship to each other. I have no wish to contend for one or the other of these two alternatives as mutually exclusive. I only say that one explanation which the associated conditions admit of is that the obesity is the result of arrested cerebral development or diminished brain-work. In such cases we have a growing organism very early deprived of a special sense, and no doubt of a very substantial source of acquired knowledge. Experience is then in its earliest infancy; memories are but few, and, unless the other special senses, by quickening, afford a complete compensation, the brain must be the loser, in so far as work and education are, at this period, a gain to it. If therefore the brain, the sexual organs, or any part, no matter what, which by its importance in the animal economy makes large demands upon the general stores, fails to develope properly, or is removed from taking its accustomed part in the general consumption and discharge, there is a lessened drain upon the stock, and other parts are not unlikely to gain thereby and to become hypertrophied. This is, perhaps, more likely for the brain than for other parts, because its controlling power over nutrition is so all-pervading. In cretinism the brain development is arrested—in obedience to what conditions, at present we know not,—and the connective tissues hypertrophy, I should say, in consequence.

Here the question naturally arises, How is it that the connective tissue hypertrophies, and not other tissues? To that I should reply, For two reasons. First, it is low in the scale of differentiation—nearest of all to embryonic tissue; and it is well known that in proportion to the differentiation of the tissue, so is it seldom properly replaced after injury, and but seldom grows into tumours. Striated muscle and nerve fibres are only found in tumours of new growth in the rarest instances. The lower tissues are repaired—that is to say, grow again perfectly—and frequently hypertrophy, both in a generalised way and locally in the form of tumours. But there is another, and by no means unimportant, reason for the growth of connective tissue in excess under these circumstances. It is a tissue, if I may so express myself, which is born in a golden spoon. It lives in a land overflowing with milk and honey. If other tissues are starved it can generally do well for itself, for it is at the fountain-head of supply. It is even not improbable that, under circumstances such as those we are discussing, it is more than usually well off, because the nervous system, which does so much to regulate and control supply, is badly developed, and its healthy functions are lessened in action or in abeyance altogether. Does not a clue exist here to the answer to the question why the connective tissues hypertrophy so frequently, and to the cause of the fixed relationship there appears to be between such hypertrophy and cretinism? I would, however, again insist that cretinism is no isolated example of this fixed relationship. Equally true is it for pseudo-hypertrophic paralysis; for in many of such cases, at any rate, the intellectual faculties are very feeble, and the limbs grow fat at the expense of the muscles.

To come now back more directly to the state of myxœdema, as described by Dr. Ord, and taking the view I have done—the old view, I suppose it is—of cretinism in children, I am of course unable to admit or to think that there is any alliance or connexion between the two states. Cretinism, and the allied conditions of which I have made mention, appear to me to be an abnormal development and abnormal growth dependent upon some want of harmony between the various departments which regulate and draw upon the nutrient supplies. An error of this kind may be central or peripheral, but with cretinism it is central. Myxœdema, on the other hand, seems to be quite another thing; it is a senile degeneration affecting the intercellular connective tissue in all parts of the body. The points in favour of this are—first, that the disease would appear to occur in the degenerating decades of life, when people have passed their prime; secondly, that in most—I think I may say all—of the hitherto recorded cases, and in a case of my own that I have not yet recorded, the appearance of the patient has suggested the existence of chronic Bright's disease; and thirdly, that, as an actual fact, Dr. Ord has found the myxœdema to be very widely distributed through the tissues, and there is every reason to suppose that the brain and spinal cord are not exempt. If this is the case, then, as regards the brain and cord, we have a disease of similar distribution to insular sclerosis, and a mental condition in some respects resembling the mental state in that affection. The mental slowness of perception which the myxœdematous patient exhibits is well accounted for in this manner, without applying to it any less probable hypothesis; and I think that Dr. Ord's hypothesis is less probable because I can think of no parallel case at all like it which is productive of any such effects. Here are people whose sense of touch, on the view I am combating, is blunted by the encasement of their touch corpuscles and peripheral nerves in myxœdematous tissue, and whose intellects are blunted from the want of proper stimu

lation. But take the case of a man blind or stone deaf. In either case he retains his acuteness of intellect notwithstanding; and these are instances, be it remembered, of complete destruction of a special sense. The myxœdematous woman is at worst only very partially hampered, and, I believe, so partially as to be quite inadequate to explain such mental failure in a previously fully-developed brain. I can understand that in the event of a complete anæsthesia of the surface in infancy—supposing such a condition to occur in some case of congenital ichthyosis or scleroderma, for example, though I do not know of such,—some irregularities of mental development might be expected, corresponding with those of deaf-mutism; but evidence is wanting to show that any, even total, abolition of one organ of special sense after the full development of the brain can do any appreciable harm to the intellectual faculties. The memories of the bygone past are a store sufficient to allow of imagination participating in the experiences of the present, and afford a mental exercise sufficient for mental health. I might even say more: that in those cases I have mentioned of blindness in early childhood there has been wonderfully little evidence of any impaired cerebration; and I can even conceive the very opposite, viz., that the loss of sense might in other respects be a gain to some people in this rushing life, by cutting off some sources of cerebral stimulation, and by allowing more time for reflection and more thorough mental operations than is possible in many cases at present. In fact, I have long thought—and I am not, I believe, singular in such an opinion,—that myopic individuals are well off with their deficiency: they only see half what other people see, and their brain-worry is reduced by so much, and the power for brain-work increased in proportion.

In concluding, I have only to state why I have thought this question worth discussing, and why I consider the facts recorded by Sir W. Gull and Dr. Ord (apart from their value as clinical facts, which no one would wish to contravene) of far-reaching importance. The reason is, because these cases seem to me to afford an example of senile degeneration of a peculiar form. The point is this. We have been living in an atmosphere of cell-growth and inflammation. Senile changes have of late all been called interstitial inflammations, and the older view of degeneration has almost passed out of sight. To anyone who will give a little consideration to the composition of blood, lymph, and the elementary structure of the connective tissues, this must seem to be an exaggeration, and therefore a false position. It is surely probable, to say the least of it, that degenerative processes are both numerous and important, and myxœdema is a condition proved by chemical analysis, which substantiates this opinion for one degeneration. Arterio-capillary fibrosis must, I think, certainly be regarded as another; and probably closely allied to these comes a third—a generalised solid form of œdema, not rich in mucin nor associated with arterio-capillary fibrosis. There is a tendency with some to put all these conditions together, and to call them in common "chronic Bright's disease." I venture to protest against any such generalisation. One form of chronic Bright's disease ("the granular kidney") may be, and I believe is, an instance of one form of senile degeneration, not inflammatory, affecting the kidney. But the degeneration includes many other cases which are in no sense cases of chronic Bright's disease, and the two terms, "arterio-capillary fibrosis" and "chronic Bright's disease," are by no means synonymous, as some would seem to wish us to hold; nor do I think that arterio-capillary fibrosis is the only degeneration by many with which we have to deal. To put all these conditions down in one class like this is, I maintain, to make a real advance from the clinical side of the study of disease, and yet to fail to take advantage of it on the pathological; and I believe that the real teaching of myxœdema, and changes like it, is that it points to the probable existence of diseases degenerative, and not inflammatory or productive of cell-growth, and for the investigation of which the time is ripe by reason of the advance that has been made of late years in the domain of physiological chemistry. I will only add that Dr. Ord will, I am sure, forgive me for calling in question his hypothesis concerning the mental symptoms of myxœdema, if he rightly interprets my object in doing so. It is to claim an import in general pathology for his observations which is, I think, the greater in proportion as it can be shown that myxœdema is a generalised disease of all parts of the body, and not of one organ only. It is for this that I have argued against the functional nature of the cerebral symptoms, and in favour of organic disease of the brain.

Weymouth-street, W.

CASE OF CONTINUED HÆMOGLOBINURIA, APPARENTLY HEREDITARY.

By ROBERT SAUNDBY, M.D. Edin., M.R.C.P.,
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On November 24 last I was asked to see W. H. E., aged sixteen. He complained of cough, and pain in the left side; he had been ill two days. Pulse 120; respirations 18; temperature 102° Fahr. Percussion showed about two fingers' breadth of diminished resonance at the left base posteriorly; respiratory sounds everywhere slightly harsh; expiration prolonged. The heart's apex was in the fourth interspace, three inches and a quarter to the left of the middle line, just inside the nipple; there was a systolic murmur at the base propagated into the neck, and a loud *bruit de diable* in the jugulars. In the left hypochondrium there was a large tumour which reached across to beyond the middle line of the abdomen; its inner border was rounded, tense, and presented a well-defined notch; there was much tenderness in this region. No enlargement of the liver was detected. The bowels had not been moved for three days. There was great difficulty in micturition; urine could be passed only in the "knee-and-elbow" position. The urine was porter-coloured, and deposited a brown flocculent material composed of urates, oxalates, blood-casts, and granular matter like broken-down blood corpuscles. The fluid was acid, specific gravity 1017, contained a considerable amount of albumen, but no sugar or bile. My friend, Dr. MacMunn, examined the urine with the spectroscope, and reported that the colour was due to the presence of met-hæmoglobin and urobilin. The patient speedily recovered his health, and I had an opportunity of examining him on December 12. The splenic dulness in the axillary line was ten centimetres (three inches and three-quarters); the limits of dulness in the long axis of the tumour were, from the vertical axillary line downwards and forwards, twenty-six centimetres (ten inches and a quarter). The heart and liver were as above described. The patient's aspect was very anæmic, but his blood showed only a very slight increase in the relative number of the white blood-corpuscles. No other abnormal appearance was noted.

I learned from the patient's mother that he has always passed dark-coloured urine from his birth. His father died at the age of thirty-seven, and suffered in the same way; his spleen on post-mortem examination weighed seven pounds and a half. There are two sisters, one believed to be healthy, but the other passes dark-coloured urine whenever she gets out of sorts.

At my first visit I ordered an enema, which gave great pain and caused severe prostration. The mother informed me that during his father's illness she had noticed the same occurrence. On the second examination the spleen was less prominent, and the notch could not be felt so distinctly as before. The treatment employed was quinine in doses raised gradually from one to five grains three times daily.

The Tampon in Uterine Hæmorrhage.—Dr. Griswold, of Hartford, Connecticut, writing to the *Louisville Med. News* (April 3) states that for the last twenty years he has derived great advantage from the use of alum for a tampon, when this is required in uterine hæmorrhage, and always keeps a piece ready for emergencies. It is of the size of a large hen's egg, ovoid in shape, and generally left a little ragged, though without sharp points. Around the middle is cut a groove, about which is tied a bit of strong, but not large twine, leaving the ends to hang out of the vagina. No preparation is necessary, the egg being introduced endways, turned half round so as to bring the long diameter across the vagina, and pushed downward and then upward against the os. When the vagina is large, packing has to be added to secure the retention of the egg in position, but when the vagina is small and close this is not required. This plug Dr. Griswold has always found effective, and in no case has he had to apply it a second time. It is easily removed, and no ill consequence has ever followed its employment.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

ST. MARY'S HOSPITAL.

ANEURISM OF THE FIRST PART OF THE ARCH OF THE AORTA COMMUNICATING WITH THE RIGHT VENTRICLE.

(Under the care of Dr. HANDFIELD JONES.)

WILLIAM H., aged thirty years, a labourer, was admitted on January 12, 1880. His family history, immediate and remote, was very good, and he himself until recently had always been strong and healthy. About three years ago he attended at this hospital as an out-patient; he then complained of pains in the lumbar region, brought on by a cold, but was not seriously ill. He had been accustomed to do very heavy work, carrying bags of lime and cement frequently of 200 lbs. weight. Until three months before admission he had felt quite well. For the last two months his illness had been marked. He felt much weakness; his legs and thighs began to swell, and when he walked the scrotum also became swollen. He had also been very short of breath. For about a fortnight he had had a bad cough, with slight, tenacious mucoid expectoration.

On admission, patient is a stout, well-built man. The face is congested; the venous radicles generally are large and distinct. He has some dyspnœa. The legs and scrotum are œdematous. The urine is acid, of a dirty-brown colour, loaded with urates, free from albumen or sugar, specific gravity 1022. The apex-beat is distinct on the left side in the fifth intercostal space just outside the vertical nipple-line. There is a very marked systolic thrill to be felt at the præcordium, and there is a heaving impulse. At the mid-sternum the heart-sounds are represented by an almost continuous *bruit de diable*, no distinct first or second sound being heard. The same murmur is heard at the apex and ensiform cartilage, and in the back at the left side, but it is heard most distinctly at the apex. The left jugular vein is turgid. The area of cardiac dulness extends above from the third left intercostal space, and laterally from the midsternal line to just outside the apex-beat. No bruit is heard over the carotids, but over the second intercostal spaces on both sides a diastolic bruit is distantly heard. The pulse is small and weak, 100 to the minute. The tongue is coated and moist, appetite is poor, and patient complains of much thirst. There are signs of deficient entry of air, and there is crepitation over the lower part of the chest behind on the left side; elsewhere breathing is normal. Temperature 97·4°. During his first night in the hospital patient slept very little, and his cough was troublesome.

January 14.—He has had more rest during the night; the cough remains the same, and the temperature is still subnormal. At the second right costal cartilage there can now be heard a double murmur, the diastolic being the longer; the systolic is faintly heard on the left side of the neck; at the midsternum there is a distinct double murmur, the second one being very loud. At the fifth interspace within the vertical nipple line there is a loud whirring murmur, almost continuous, but not equally loud, throughout the cardiac revolution.

17th.—He sleeps very little; the epigastrium is painful and tender; the lips are dry and puffy. Temperature 97°. He passes little urine—about twenty ounces in twenty-four hours.

21st.—There is now some diarrhœa; the conjunctivæ are yellow, and the urine contains bile. The scrotum and legs are still œdematous.

23rd.—There is severe pain in the hypochondriac and epigastric regions; the cough is troublesome, and there is expectoration of some viscid mucus. The pulse is rapid and weaker; the cardiac sounds remain about the same; the œdema is increasing.

27th.—There had been no marked change in patient's condition, but he died suddenly last night at twelve o'clock. The temperature remained subnormal throughout.

Post-mortem Examination.—The heart weighs twenty-seven ounces; there is slight excess of fluid in the pericardium. The heart's apex lies opposite the sixth space, four inches from the median line. The right border is almost horizontal; the right cavities extend one inch and three-quarters to the right of the median line of the sternum. The heart feels flabby; the right cavities are distended with black fluid blood. The right auricle is dilated and slightly hypertrophied; the tricuspid valve is insufficient; its circumference is four inches and two-thirds. The right ventricle is dilated and hypertrophied. At the commencement of the conus arteriosus, just behind the large flap of the tricuspid valve, is a nearly circular opening in the ventricular wall, six-sixteenths by three-sixteenths of an inch in size. Its margins are smooth, rounded, thickened, and it leads into the aneurismal dilatation of the first part of the aorta described below. The foramen ovale is quite closed. The mitral curtains are a little thickened, and the valve is insufficient. The aortic valves are healthy. There is an aneurismal dilatation of the first part of the arch of the aorta just at its commencement bulging to the right behind and below the right aortic flap. This dilatation communicates with the aorta by an irregularly triangular orifice, which is on a plane parallel with the aortic and pulmonary cardiac orifices, but about half an inch above them, the base of the triangle being formed by the right aortic flap; length of base one inch; height of triangle (from nodulus Arantii to apex) three-quarters of an inch. The aneurismal sac forms a cavity the size of a Tangerine orange; its anterior wall is formed by the posterior wall of the conus arteriosus, and at the bottom of the sac is the orifice leading into the right ventricle. The orifice of the pulmonary artery is smaller than normal, being only about two inches and three-quarters in circumference. The left ventricle is two inches and three-quarters thick. A thousand cubic centimetres of straw-coloured fluid was removed from the peritoneal cavity. The liver weighs fifty-nine ounces; it is congested, and is a good specimen of nutmeg change. The kidneys are deeply congested, but otherwise normal. The lungs are congested, but normal. The right pleura contains about 500 cubic centimetres of straw-coloured fluid, and there is a small quantity in the left.

ACUTE YELLOW ATROPHY OF THE LIVER IN A YOUNG MAN.

(Under the care of Dr. HANDFIELD JONES.)

Charles T., aged twenty-three years, was admitted into the hospital on January 29, in a moribund condition, and died the same day. He had been lately working as a 'bus conductor, but had formerly been employed in a wine merchant's vaults. During the Christmas holidays he was drinking continually for about a fortnight, but it has not been ascertained if he was an habitual drunkard. Ten days before admission he applied to the out-patient's room, and was then jaundiced, but was not seriously weakened. He then said that his health was usually good, and that his constitution was strong. At that time the liver was found to be rather atrophied. Saline mixtures, podophyllin, and mercury were then prescribed, and he continued attending. He was last seen on January 27, and did not seem to be getting worse. On the evening of the 28th he complained of excruciating pain about the region of the liver, but was then quite conscious and sensible. By the morning, however, he had fallen into a semi-comatose condition, in which state he was brought to the hospital and admitted.

On admission he is of a dusky-yellow colour all over the body; he lies flat on his back, with his eyes shut and his mouth open; his lips and teeth are black with sordes. His legs are stretched out, except when he is touched; he then draws them up convulsively, at the same time jerking his body forwards and uttering a loud, piercing cry. When undisturbed he is generally quite still, but now and again he grinds his teeth and breathes stertorously. Occasionally he draws himself up convulsively, and screams, without any external irritation. He does not appear to be perfectly unconscious, for when a whistle is blown he notices it and opens his eyes. The screaming fits come on when he is touched or pressed on almost any part of the body, but especially when he is pressed about the region of the liver.

At 2 p.m., when seen by Dr. Handfield Jones, the following points were made out:—On having his arms pinched he opens his eyes and screams. Respiration is somewhat stertorous; pulse quite regular and of good force; pupils large and

sluggish. He screams now and then spontaneously. There is no facial paralysis. He moves all his limbs after a small amount of irritation. He can swallow well, but moves his lips during the first stage in a peculiar manner. At 5 p.m. the pulse was soft and jerking, his condition otherwise being unchanged. Croton oil and castor oil were administered, the head was shaved, and leeches were applied behind the ears. At twelve midnight patient died. He was quite unconscious to the last, but ceased to scream after his head was shaved. The bowels were freely opened, and urine of a deep yellow colour, staining the bedclothes, was passed involuntarily. The blood drawn by the leeches was impregnated with bile—when a drop fell on the linen, a yellow ring being formed round it. No further history was obtained, except that he was said to have caught a severe cold about three months before, and that the jaundice had been present for about a month. The temperature rose from 97° on admission to 103° at 10.30 p.m.

Post-mortem.—The liver is small (sixteen ounces below average weight), pale and mottled. On section it is of a dull yellow colour, much more marked at some places than others, and in these patches the liver structure is softer than normal. The surface is generally wrinkled and puckered, the outlines of the lobules are indistinct, the biliary ducts are empty, and there is no staining along their course. The gall-bladder contains a small quantity of viscid, colourless fluid, and its lining membrane is paler than natural. There is no obstruction of the common hepatic or bile ducts. The kidneys are extremely congested, the cortex being of a pale yellow colour. The bladder is quite empty. The lungs are congested, and present a large number of extravasations, especially at the bases, of the average size of a split pea. The bronchi are congested, and contain a quantity of blood-stained serо-purulent matter. There are several minute capillary extravasations beneath the parietal and visceral layers of the plenra. The brain and heart were found to be healthy. Abundant evidence of the presence of leucin and tyrosin in the liver was found on examination.

South London School of Pharmacy.—The medals and certificates for the term ending April 15 were presented by the Secretary, on the 17th ult., to the following successful competitors:—Senior Chemistry: Medal, Mr. Price; Certificate, Mr. Carruthers. Junior Chemistry: Medal, Mr. Hill; Certificate, Mr. Waring. Materia Medica: Medal, Mr. Williams; Certificate, Mr. Horne. Botany: Medal, Mr. Walkley; Certificate, Mr. Waring. Pharmacy: Medal, Mr. Waring. The Secretary's Prize for Organic Chemistry was presented by the Chairman (Rev. S. Bache Harris) to Mr. W. Williams.

Medical Officer of Health for the Port of London.—The Sanitary Committee have selected five candidates to be submitted to the Court of Common Council, with whom the final decision lies. Twenty-three candidates presented themselves, and a careful examination of their several merits resulted in the choice of the five gentlemen whose names we give in alphabetical order, viz.:—Dr. Benjamin Browning, 70, Union-road, Rotherhithe; Dr. William Collingridge, Selwood, Mayow-road, Forest-hill; Dr. Frederick William Humphreys, 19, Trinity-square, E.C.; Dr. John F. J. Sykes, 20, Fitzroy-square, W.; and Dr. George Turner, Arundel-street, Portsmouth. The election will probably take place at the Court of Common Council to be held on Thursday, May 13.—*City Press.*

Prolonged Artificial Respiration.—The *Boston Med. Journal*, March 25, quotes the following from the *Ohio Med. Recorder*:—"Dr. J. P. Thomas, of Pembroke, Kentucky, publishes in the *Philadelphia Reporter* a remarkable case of opium-poisoning. An infant three days old was given one-third of a grain of morphia by mistake. The doctor saw the case three hours after, but could not induce vomiting. The patient could not swallow, the sphincter ani was so relaxed that injections were useless, and the doctor's hypodermic syringe was broken. The infant was wrapped in cloths wrung out of hot coffee. Seven hours after taking the morphia the respiration had entirely ceased. Artificial respiration was resorted to, after which voluntary respirations continued for some time, only again to cease, and again to be established artificially. This was kept up for *forty-eight hours*, and ended in the recovery of the patient."

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Medical Times and Gazette.

SATURDAY, MAY 1, 1880.

THE NURSING DIFFICULTY AT GUY'S HOSPITAL.

No means has yet been found of terminating the crisis at Guy's Hospital, but the Court of Committees of the Hospital have supported the medical staff, against the Treasurer, in an important question connected with Miss Lonsdale's *Nineteenth Century* article. Soon after the appearance of that article, Dr. Habershon, the Senior Physician, wrote to Miss Lonsdale, stating that he thought her presence not desirable, and that he hoped none of his colleagues would allow her to go round with them. This letter Miss Lonsdale took to the Treasurer, who, considering that his autocratic authority was interfered with, wrote to Dr. Habershon, stating that he should lay his letter, and all the circumstances connected with it, before the Court of Committees; and that he should be glad to bring before them at the same time any explanation Dr. Habershon might have to offer as to his reasons for thus summarily treating a lady in the Hospital without making any reference in the first instance to the Treasurer as the chief executive authority. Dr. Habershon, in reply, regretted that his refusal to allow Miss Lonsdale to go round with him on his visits at the Hospital should be considered by the Treasurer an interference with his authority; but added, in effect—"The question between us (Miss Lonsdale and myself) is respecting my own moral and professional character, as well as that of my colleagues, which this lady-pupil has assailed in the current number of the *Nineteenth Century*, and which I claim a right to protect without reference to you in the first instance as the chief executive authority." On that ground, Dr. Habershon said, he adhered to his statement that the lady's presence was not desirable when he was going round; and he inquired whether he was to understand that the Treasurer considered the attack on the moral character of the staff as justifiable.

All Dr. Habershon's colleagues supported the step he had

taken, and, in a memorial addressed by them to the President and governors, directed attention to the charges brought by Miss Lonsdale against the medical staff and the students. They stated that their feeling was the same as Dr. Habershon's —that it was not desirable to allow Miss Lonsdale to accompany them on their visits to the wards; and they claimed the right, in case of need, to refuse the attendance of any lady-pupil during their visits, exactly as they would if one of their own students had misconducted himself. The staff further took the opportunity, we believe, of observing that, though a considerable time had elapsed since the publication of Miss Lonsdale's article, they had not heard that the Treasurer had taken any steps to defend the honour of the institution then under his control.

The correspondence between the Treasurer and Dr. Habershon, and the letter addressed by the medical staff to the President and Governors, were taken into consideration at the Court of Committees held on April 14, and it was resolved that the Court disapproved of any publication relating to the management of the affairs of the Hospital by any person attached to the Hospital in any capacity; and that the Court, therefore, felt that, in the circumstances, Dr. Habershon was justified in declining to allow Miss Lonsdale to be present while he was visiting the patients in his wards.

It remains to be seen whether, after such a rebuke from the Court of Committees, the Treasurer will not feel obliged to resign his appointment.

DR. ACLAND ON THE NEW BALTIMORE MEDICAL SCHOOL.

We this week conclude a letter which was addressed, on invitation, by Professor Acland to the trustees of the New Baltimore University and Hospital. This institution has been most munificently endowed, and no pains have been spared to render it complete and perfect in every way. It is notorious that in many parts of the United States a medical school is "run" with the intention of passing through as many men —with education or without it—as is possible in the shortest period. And to judge from the nonsense to be found in a good many of the American periodicals which reach us, the teachers cannot be very far ahead of the taught. That there are good schools and good teachers in America is well known to us all, but the majority cannot be pronounced of a high type. It has been the aim of the trustees of the Johns Hopkins University and Hospital to prepare a scheme for, and if possible secure the working of, an institution which shall be typical of its kind. How far they are likely to succeed in this we cannot yet tell, and some parts of their plan seem to us of doubtful value. However, we shall see what time brings forth.

First, the trustees insist that all intending students shall pass an examination in general education, and be of the age of sixteen. This most of us on this side of the Atlantic would consider to be rather too young; for the arts which, as Horace says, modify and mollify character, can be at that age but little understood. To compensate for this, however, and to give full vent to the utilitarian principles of the age, the young men who have passed this examination are to be kept at scientific work for three years,—chiefly at chemistry, physics, and biology,—until, in fact, they are qualified to take a degree in science in the University. Having passed this, a certain number will be selected to become resident students in the Hospital, enjoying well endowed scholarships, where, we take it, they will reside for two years more. This part of the programme is evidently founded on the plan of Netley, where the young surgeons are trained for four months both in theory and practice, but we question whether this long residence in hospital will be good for the pupils. It is with us a well-recognised fact that too long a stay in a hospital atmosphere is prejudicial to health, both bodily and mental, and that the plan which gives a certain variety in residence and occupation is best suited for the ultimate development of the surgeon or physician.

The minute details of the scheme are not now before us, but the aim of the trustees is clear: they desire to give an education of a high order, and to give encouragement to those most capable of original research. But Dr. Acland throws out a hint that this is something more than is required in ordinary cases. Thus he says—"In the education of the masses of practising physicians and surgeons, the organisers of education, the teachers and the examiners, should aim at two great objects—

"1. At securing that the examinations demand of them mainly what they should know as practitioners; and

"2. At teaching them that which they are to be examined in so that the full powers of the average mind may be developed in a manly way." Nor does Dr. Acland think that this need in any way preclude the training of the abler students so as to attain a higher standard.

We shall in this country watch the experiment with some anxiety, for it is clear that we must soon take a new departure in the teaching of medicine. The tendency is ever increasing to separate purely scientific from strictly medical education. In the larger schools it is still possible to secure good classes on such subjects as ordinary chemistry, physics, and elementary biology; but at the smaller schools this will not be the case for long. Even now we suspect that many would be glad to abandon them, were that feasible. There is no independent ground on which students can meet, except, we believe, the hall of the Royal College of Surgeons, where hospitals and teachers are freely discussed about examination time; but this, though useful in its way, is hardly education in the strict sense of the term. If the hospital schools are to turn their attention to what is after all their true function —the teaching of practical medicine and surgery—we must have some preliminary training college totally independent of any of the existing institutions. The nucleus exists in South Kensington, but that is so remote from any practical hospital work that we fear it will never occupy the position we aim at. We most heartily wish that one or two Johns Hopkinses would arise among us.

REPORT OF THE MEDICAL OFFICER OF THE LOCAL GOVERNMENT BOARD, 1878.

The Annual Report of the Medical Officer of the Local Government Board for the year 1878, the preparation of which was delayed by the illness and death of Dr. Seaton, has now been published; and must be looked upon as Dr. Buchanan's first report as Medical Officer, though he signs it as Assistant Medical Officer. The Report deals with the Reports of Medical Officers of Health, Local Inquiries as to Prevalence of Disease, Dr. Ballard's Report on Effluvium Nuisances, and other matters of great sanitary interest; but perhaps the most interesting part of it is that treating of the Administration of the National Vaccine Establishment, and of Animal Vaccination. Dr. Buchanan is able to note an improvement between 1875 and 1876 in the percentage of children born in the metropolis, and not finally accounted for as to their vaccination at the date of the several returns. In 1875 the percentage was 9·3, while in 1876 it was reduced to 6·5. The improved percentage, however, still shows an inferior degree of completeness in the metropolis as compared with other parts of the kingdom; and the significance of this relative incompleteness was being inquired into in the department. Vaccination has improved

in quality also, as well as in quantity. Charges of lymph were distributed during the year 1878, from the National Vaccine Establishment to 9590 applicants, from six only of whom complaints were received of some untoward result having attended the use of the lymph; and each complaint was made the subject of a special inquiry. In one erysipelas had followed vaccination, but no evidence was obtained implicating the lymph. Exposure to some local infection during the progress of the vaccination appeared to have been the real cause of the erysipelas. The other complaints related to some irregularity in the course of the vaccination; but inquiry showed that in each instance, in all other children vaccinated with the same lymph, no irregularity had occurred. It was therefore highly probable, to say the least, that the irregularity complained of—in no instance of any serious importance to health—had been due to the health of the child vaccinated rather than to any condition of the lymph employed. No hint of a case of syphilitic disease connected with vaccination was received from any one of the 9590 medical practitioners to whom lymph had been supplied.

Two questions relating to animal vaccination—the one pathological, the other administrative—were under consideration by the Department during the year. Dr. Klein conducted at the Brown Institution, under the supervision of the Medical Officer, of Dr. Burdon Sanderson, and of Mr. Ceely, of Aylesbury, some experiments with the view of determining whether or not vaccinia can be produced in bovine animals by inoculating them with the lymph of human small-pox. Sixteen heifers and fifteen milch cows were inoculated with lymph taken from small-pox at various stages of the disease; but no affirmative result was obtained. It is intended, however, to continue the experiments further, as opportunity may serve; and for the present the details of the experiments made will not be made public.

As regards the administrative question, Dr. Buchanan confines himself to a statement of the results of the personal inquiry made by Dr. Seaton, during the autumn of 1878, into the use of vaccine lymph cultivated upon calves and employed in human vaccination at certain stations on the Continent, Dr. Seaton having drawn up a memorandum, though not a complete report, on the subject.

Dr. Ballard, it will be remembered, made use of these results in his speech at the Conference on Animal Vaccination held some months ago. Dr. Seaton was satisfied that the difficulties which had at first been encountered in the transmission from animal to animal of lymph, derived in the first instance from a natural source of cow-pox, had practically ceased; but he found that there was still a considerable difference in the degree of certainty with which a desired result could be obtained in vaccination with fresh lymph taken direct from the calf, as compared with that obtained with fresh lymph taken direct from a child. "In the hands of an experienced operator with fresh *humanised* lymph in England, 2996 children out of 3000 were successfully vaccinated at the first attempt; and failure to produce a vesicle when it was intended to produce a vesicle occurred so rarely that, with a fair approach to certainty, every child obtained the whole result which the operation was intended to produce." While, according to Dr. Seaton's observations at Amsterdam and the Hague, vaccination done by very experienced operators, with fresh *animal* lymph, showed two total failures out of ninety-one operations, and twenty cases out of the ninety-one where the number of vesicles had been less than half the number that the operator had intended to produce. At Rotterdam and Berlin the percentage of failures was still larger. "These failures to obtain complete results had in Berlin led to a large proportion of the children receiving an imperfect degree of protection against small-pox, and at Amsterdam and the Hague had led to the practice of making a much larger number of insertions than were regarded as necessary for protection against small-pox, merely because the operator expected that some of the insertions would fail." Dr. Seaton, in the memorandum of which we have spoken, remarks that it was the great object, steadily held in view, in the reorganisation of the public arrangements for vaccination in England, that these should be such as should make the single performance of the operation as completely successful as, in the nature of things, a single infantine vaccination can be. And he observes, "Anyone who is familiar with the practice of public vaccination in England will at once see the difficulties which would be met with in inducing parents, first, to allow their children to be submitted to ten punctures, instead of the four, five, or six which are usually employed in this country, and which, under the use of the current lymph, are quite sufficient to secure the number of vesicles desired; and secondly, to allow the performance in a considerable number of the cases of a second vaccination at the end of the day week, even supposing that this second vaccination could be relied on to make good what had been wanting in the first." No one will deny that great objection would be made to the substitution of animal vaccination, with these drawbacks, were the animal vaccination made compulsory, or only animal lymph supplied by the State, but we have never either proposed or supported either measure. Dr. Seaton further says, "The substitution of certainty for uncertainty of success in the performance of vaccination was the great purpose of the reorganisation of vaccination arrangements which took place in England, in consequence of the official inquiry in 1859-60, into the then state of vaccination in this country—a reorganisation which had been, and is, working with the most satisfactory results. To admit into our system, and stamp with the sanction of Government as one of equal value, a plan to which the main objection is its uncertainty, would seem to me to be indeed an inconsistent and a retrograde step." And he asserts that, though vaccination from the calf to the human subject was practised many years ago at Brussels, at the Institut Vaccinal de l'État, yet this has been long discontinued; and that vaccination generally in that kingdom, as in this, is caried on by vaccinators, public and private, from arm to arm. "It is absurd, therefore," he observes, "to speak, as is sometimes done, of vaccination from the calf to the arm as the Belgian national system." All this was fully admitted by Dr. Warlomont, of Brussels, in the very able papers contributed by him to the Conference before alluded to. He stated that the special function of the State Vaccine Institute of Belgium is to cultivate the production of calf-lymph for distribution, as seed, to such practitioners as may need it to renew their stock. The Institute must keep up this seed without break. The State does not furnish the public with animal lymph gratuitously, though it may choose to prefer it; but the Director is authorised to furnish the lymph on payment of a fixed fee. In Brussels, indeed, all who have a preference for calf-lymph are admitted to vaccination at the Institute, and the poor are admitted gratuitously. But beyond the Brussels district the poor have to content themselves with the lymph cultivated by the vaccinators; and the well-to-do with the same lymph, or preserved animal lymph from the Institute. Dr. Warlomont added, however—"It must not be forgotten that in Belgium, vaccination not being compulsory, the State has fewer duties towards the public in this respect than in those countries where compulsion is the law. Here there is an absolute moral obligation, which Belgium would not disregard if vaccination were compulsory. Its first duty—and it would not seek to evade it—would then be to put a supply of animal lymph gratuitously, and in a supplementary manner, at the disposal

of the practitioners of whom the poor demanded it." This is exactly what we have so long urged, viz., neither more nor less than that, vaccination being, and rightly being, compulsory, the State ought to place a supply of animal lymph gratuitously, and in a supplementary way, at the disposal of practitioners of whom the poor may demand it; and we are glad to know that the Local Government Board has been "desirous of getting such information as it could obtain respecting the specialities and actual working of animal vaccination"; and that the department purposes, as occasion serves, to continue its researches in this direction. The report we have been noticing intimates also that as opportunities for observing vaccine in animals and the result of calf-vaccination on the human subject are not largely to be met with in England, "special arrangements for the further study of the subject in its various aspects may prove to be desirable."

THE WEEK.

TOPICS OF THE DAY.

The Council of the Charity Organisation Society have received and adopted a report from the special Committee appointed to consider the subject of convalescent homes, and they will now proceed to arrange and carry out the details. In the course of their inquiries the Committee has ascertained that there is great inequality in the pressure on the accommodation of the various convalescent homes, owing to the difference in the classes of cases received by them, and to the very numerous differences in the modes of obtaining admission to them. The existing homes are, as a rule, fitted only for cases requiring change of air, etc., and there is hardly any provision for the reception of infectious cases, of epileptic and lunatic cases, and of cases requiring medical or surgical care. Hence there was a marked division of labour between them and what might perhaps more correctly be termed convalescent hospitals, where cases requiring active medical treatment are received. They suggest, therefore, that convalescent institutions might be conveniently classified on this basis, and propose the establishment of an office where all information on the subject of these homes could be obtained on application, together with a statement of the rules applicable to each. By this means the public would be put in immediate possession of the names of those particular homes where accommodation at that moment existed, and many poor patients would be enabled to be transferred to them at once, instead of having, as at present, to wait for opportunities for admission.

The Council of the Society of Arts having had their attention directed to numerous cases of reputed poisoning by arsenical wall-papers, and other articles in general household use, have appointed a Committee to inquire into the practicability of preventing the employment of arsenic in any processes by which it is allowed to remain in finished goods, and to obtain evidence as to the effect of a total prohibition of the use of such processes, or the prohibition of the sale of articles produced thereby, would have upon various trades. To promote the object in view the Committee has issued a circular to manufacturers of colours, dyers, and others using colours in manufacturing processes, asking for information on certain specific points. One of the questions propounded in the circular asks whether any disadvantage would accrue to the manufacturer through a prohibition of the use of arsenic; but in any case the greater safety of the community at large is the main point to be insured.

At the last week's meeting of the Metropolitan Board of Works a deputation from the inhabitants of Gray's-inn-road attended to present the resolutions which had been passed at a recent meeting of the ratepayers. The spokesman informed the Board that the sanitary condition of the neighbourhood was so bad as to call for immediate consideration, and called their attention to the fact that under the Acts of 1876 and 1877 very little had been done, and that that little had, at present, done more harm than good. He trusted, therefore, that the Board would see their way to complete the improvements which they had commenced, at the earliest possible moment. The matter was referred to the Works Committee for consideration and report. On the recommendation of the Works Committee it was agreed that the rector of Holy Trinity Church, Gray's-inn-road, should be informed that the Board were unable to assist him in converting the disused burial-ground attached to his church into a recreation-ground; also that the Vestry of Bermondsey be informed, with reference to their memorial asking the Board to obtain an amendment of the Artisans' Dwellings Act, 1875, so as to render it unnecessary to provide accommodation for the whole of the working-classes displaced, that the subject was receiving the anxious consideration of the Board. The Special Purposes and Sanitary Committee submitted a draft reply, containing suggestions for the amendment of the Infant Life Protection Act, prepared in accordance with the request contained in a letter from the Home Secretary asking for the Board's views on the subject. Mr. Cook said that the Committee were desirous of having certain amendments introduced into the Act, as they found that out of 1096 infants farmed out in the metropolis, only sixty-seven came within the jurisdiction of the Board. In the opinion of the Committee, the operation of the Act should be extended to children not exceeding five years of age, that two or more persons should be responsible for the safe keeping of a child, and that the responsibility should be shifted from the parent to the person taking charge of the infant. Mr. Cook believed that many children lost their lives in consequence of there being no official supervision, and the Committee was therefore anxious that the Act should be amended. He moved that the reply be forwarded as requested, which was agreed to. Mr. Selway brought forward his motion on the metropolitan water-supply, of which he had given notice the previous week, but the discussion on it was, by consent, adjourned until the next meeting.

The centenary festival dinner of the Finsbury Dispensary was held last week at the Albion Tavern, Aldersgate-street, the Lord Mayor presiding. This Dispensary claims to be one of the oldest medical charities in the metropolis, having been founded in April, 1780, at a meeting held at the St. John's Coffee-house, the ancient gateway of the Priory of the Knights of St. John of Jerusalem. Amongst those who have given it their services as medical officers must be numbered Sir James Paget, who was at one time acting-surgeon, and who is now consulting-surgeon to the charity. One of its rules is that each patient shall pay a penny for every supply of medicine received. The total outlay for the past year has been £650, and for this sum 10,894 cases were treated, and 3122 visits were paid at the homes of the patients. In proposing the toast of the evening the Lord Mayor hoped that the Dispensary might flourish for another hundred years. The final statement of the managers, he said, showed a very satisfactory balance and he was pleased to find that the penny fees of the patients had more than covered the cost of the drugs supplied to them. The policy of requiring them to pay a small sum was, he thought, indisputable. He ridiculed the suggestion that this Dispensary and other kindred institutions should be supported by the funds of the City endowed charities, and felt confident that, in responding to his appeal, the friends of the Dispensary would show that they preferred

to conduct the institution at their own expense. Subscriptions and donations to the amount of nearly £700 were announced before the close of the proceedings.

It having come to the knowledge of the Medical Officer of Health of the Rural Sanitary Authority of Chelmsford, Dr. Downes, that diphtheria had broken out in the Chelmsford Prison, he applied for permission to inspect the building, with a view to making a report, and taking measures to prevent the spread of the disease. The Governor, however, declined to admit him, holding that the Secretary of State's rules precluded him from doing so. Dr. Downes thereupon applied to the magistrates for an order requiring the Governor to receive him, but they have come to the conclusion that they have no jurisdiction in the matter. It is stated that there have been eleven or twelve cases of diphtheria in the prison, which contains over two hundred inmates.

A serious charge has been brought by the Local Government Board against the management of one of the departments of the Atcham Union, Shrewsbury. Dr. Mouat, Medical Officer of the Central Board, accompanied by Mr. Dansey, the Poor-law Inspector of the district, recently visited this workhouse, and has made a report on the untidiness of the sick-wards, and the "extremely untidy state of the surgery," and the want of classification of sick cases. Mr. Dansey attended the last meeting of the Guardians, and impressed upon them the importance of making some changes in the dietary, and of taking every possible step to prevent the continuance of the existing state of things in the Atcham Union, both as regards the health of the children and the nursing arrangements.

CLINICAL EXAMINATIONS AT THE ROYAL COLLEGE OF SURGEONS.

At the final examination for the diploma of membership of the Royal College of Surgeons, last week, there were some very good clinical cases, on which the candidates were examined, selected from the following metropolitan hospitals, viz., St. Bartholomew's, Guy's, the Middlesex, Ophthalmic (Moorfields), King's College, and University College. The following were the cases:—Periostitis of bones of forearm; exostosis of the tibia; ununited fracture of humerus; epulis of lower jaw; ptosis of upper eyelid from paralysis of third nerve; encysted tumours on the scalp; omental rupture; bursa with thick sac; exostosis on lower end of femur; disease of cervical vertebræ with strumous abscess; epithelioma of the cheek; subcutaneous osteotomy of femur; rodent ulcer of the face; periosteal enlargement of the ulna, with strumous glands in the neck; strabismus; disease of the hip-joint of old standing; opacity of both corneæ with conjunctivitis; disease of the skull-cap from a fall; specific sores on the penis, with ulcers in the throat; chronic hip disease; syphilitic disease of the tongue; lipomata; strumous disease of the left knee—excision of the right; disease of the tibia and fibula; iliac abscess.

TRUE SCIENCE IS ALWAYS SCEPTICAL.

A few weeks ago, as our readers will recollect, we had occasion to offer some criticism on the report of Mr. W. H. Power, of the Local Government Board, regarding the nature of the febrile disease which recently attacked so many of the boys on board the training-ship *Cornwall*. After an examination of the facts adduced in the report, we could not agree with Mr. Power's conclusion that the disease in question had been trichiniasis. So far as we have observed, we stood alone among medical critics in venturing to disagree with Mr. Power; but it would now seem that that gentleman himself has had reason to doubt the accuracy of his own view of the *Cornwall* epidemic. At the last meeting of the Pathological Society a paper was read by Dr. Buchanan, in which Mr. Power stated that he had been making microscopic examinations of the muscles of patients who have died of typhoid fever. Thus far it would appear he has discovered certain worm-like bodies in such muscles, which, although not quite similar to the bodies seen in the muscles of the boy who had died on board the *Cornwall*, must be held as still further weakening the evidence that the boys of the training-ship were suffering from trichiniasis. As to the positive value of these new observations of Mr. Power, in regard to typhoid fever itself, we are inclined to think that, so far as they have been already recorded, they are of too crude and intangible a character to afford scope for profitable discussion. In these days the microscope can, no doubt, do a great deal, but the memory of some recent examples of damaging blunders in regard to the microscopical appearances alleged to be characteristic of certain specific diseases ought to make all sound pathologists very cautious in pronouncing upon the value of any new discovery of the presence of visible and distinctive organisms in the tissues of those who are attacked by such a disease as typhoid fever.

HOWELL *v.* WEST AND JONES.

Since we noticed this case, last week, Mr. Howell has applied to the Court of Queen's Bench for a rule *nisi*, calling upon the defendants in the case to show cause against a new trial on the ground of misdirection of the Lord Chief Justice, and that the verdict had been against the weight of evidence. The application was made by the Solicitor-General before the Lord Chief Justice, Mr. Justice Field, and Mr. Justice Manisty, and was argued at considerable length. But the Court unanimously refused to grant the rule *nisi*. The opinion expressed by each of the judges was, in very clear and unhesitating terms, that it would be wrong to disturb the verdict of the jury as regarded either of the defendants. We will not state more fully the judgments given, as Mr. Howell, not satisfied with this second defeat, has since applied to the Court of Appeal of the Supreme Court of Judicature for time to move, by way of appeal, for a new trial; and this application has, of course, been granted, as the Solicitor-General is at present occupied in another court.

THE CASE OF HYPERPYREXIA AT THE ADELAIDE HOSPITAL, DUBLIN.

Last week we alluded to this remarkable case, under Dr. James Little's care. Since our former note the temperature has repeatedly risen to more extraordinary heights even than those then reported. On Monday evening, April 26, a maximum of 125·5° Fahr. was recorded. This marvellous temperature is probably unique in the annals of clinical medicine. Meanwhile the patient lives and does well.

THE LOWER THAMES VALLEY DRAINAGE INQUIRY.

The Lower Thames Valley drainage inquiry still continues, and indeed may be said to show no signs of nearing an end. The promoters of the scheme have at last concluded their evidence, the latter portion consisting of the re-examination of Mr. Alderman Ellis and Mr. Buckland, land valuers, and Mr. Baldwin Latham, C.E. On the twenty-fourth day a discussion arose, which at one time threatened to become somewhat heated. Mr. Latham was being questioned as to the system of sewage disposal pursued at Birmingham, when the inspector observed that it was in no way parallel to the present application. Mr. Michael, Q.C., proceeded to contest this point, and during his observations complained that the remarks made by the senior inspector showed that the case

in his mind had already been prejudged, although it was still at hearing. After some explanation the inspector assured him that in this he was entirely mistaken, and the proceedings were ultimately resumed. The evidence of the opponents of the scheme has now been commenced, and the Lambeth Water Company have tendered evidence to show the dangers which will threaten their water-supply if the proposed scheme is sanctioned. A large portion of the water obtained by them was stated to come from an underground area surrounding their works; if this subsoil supply were cut off the Company would be compelled to double the area of their reservoirs. As matters stood there was no real risk of pollution, whereas there would be great risk if so large an amount of sewage were brought within a mile of their works. Mr. Pembroke Stephens next addressed the inspectors on behalf of the owner of a large estate, portions of which are required for the proposed sewage-farm and works. He read a list of the different schemes proposed in the Thames Valley since 1867, all of which, without exception, had failed; and he asked how the difficultics were supposed to vanish through merely joining the several plans together. As the case now stands it would be difficult to predict any proximate date for the delivery of the inspector's report to the Local Government Board.

MR. JOHN SIMON, C.B.

It is stated that Mr. Simon has resigned his seat in the Council of the Royal College of Surgeons, to which he was elected in 1868, with Mr. Holden (now the President of the College) and Professor Humphry. It will be recollected that Mr. Simon was President of the College in 1878. This will make four vacancies in the Council to be filled up in July next.

ROYAL MEDICAL BENEVOLENT COLLEGE, EPSOM.

The twentieth festival of this institution was held on Wednesday, the 28th ult., at the Langham-place Hotel. Sir William Jenner very ably filled the chair, and was well supported by the President of the Royal College of Physicians, the Master of the Society of Apothecaries, Sir William Gull, Sir Joseph Fayrer, Mr. Prescott Hewett, and a very numerous body of the profession, of all grades. The results were a pleasant evening well spent, and an addition of £1300 to the funds of the charity.

PATHOLOGICAL SOCIETY OF DUBLIN.

At the meeting of this Society on Saturday, April 17 (Dr. E. H. Bennett, President, in the chair), Dr. W. G. Smith showed a heart with patent foramen ovale from the body of a woman aged sixty years. The heart's action had been irregular and tumbling, and there was a loud systolic apical murmur, the case appearing to be an ordinary one of mitral regurgitation with its usual sequelæ. After death many quarts of fluid were found in the peritoneal cavity. There was considerable pigmentation of the peritoneum, and the omentum was of a dark slate-blue colour. The pericardium was ten inches in vertical measurement, but contained very little fluid. The heart was large and flabby, weighing twenty-six ounces and a half. It presented the condition of granular fatty degeneration. Atheroma existed in the pulmonary artery. The foramen ovale was patulous, admitting two fingers. The septum in its lower part was cribriform. There was insufficiency and puckering of the mitral valve. The right chambers of the heart were dilated. There was no narrowing of the pulmonary artery. No cyanosis had been observed during life. Mr. Thomson presented some of the viscera of a child, aged fourteen months, who had suffered from croup, for which tracheotomy was performed without much difficulty or loss of blood. The child died suddenly next day. The larynx was so blocked with false membrane that all traces of the vocal cords were lost. A firm clot passed from the right auricle into the right ventricle and into the pulmonary artery. The croupous membrane existed in the pharynx as well as in the larynx and trachea. The operation performed was the high incision. In a discussion on the case, Dr. Finny said that he regarded the disease as diphtheria, and he suggested that the cause of sudden death was probably granular degeneration of the heart. The specimens were referred to the Committee of Reference for report on the pathological condition of the heart and on the nature of the clots in the heart.

HOSPITAL NURSING.

The article on which we have already commented regarding the nursing at Guy's Hospital has produced ample fruit. There are no fewer than three articles on the subject in the *Nineteenth Century* just published—one by Sir William Gull, one by Dr. Habershon, both intimately connected with Guy's Hospital; and one by Alfred G. Henriques, whose name is less widely known. In the *Contemporary* there is also an article by Dr. Moxon, but it would be impossible for us to do justice to these this week. We must therefore reluctantly postpone further discussion of a subject which concerns us all.

MEDICAL EDUCATION AND THE NEW BALTIMORE UNIVERSITY.

(*Concluded from page* 380.)

III. *As to the purely professional studies.*

15th. Now, as regards the proper studies of the last period, it is not well to say much in the present state of your arrangements.

The provisions of the medical bequest require a large hospital to be made the foundation of the medical department, under trustees quite distinct from the University. The time is not yet come for deciding on the detailed administration of this Hospital. As a special "Medical School" is to be built in the neighbourhood of the Hospital, we may assume that the lecture-rooms, laboratories, museum and library, required for materia medica, toxicology, surgery, medicine, experimental therapeutics, and comparative pathology, will be in this institution.

The clinical instruction will, I conclude, be in the Hospital, under definite regulations. The regulations will have for their central aim the progress of the endowed scholars who reside in the Hospital, and who are all trained and picked scientific observers, each with his special tastes and aptitudes as physicist, or chemist, or physiologist.

16th. Any remarks on the Hospital itself in its relation to your intentions and to those of your founder would be an impertinence had you not desired that I should make some observations thereon. They may be brief. Considering the labour that you have bestowed on inquiry, and the care you have taken in preparing the plans, there could be but one result. Dr. Billings fulfilled your instructions with all the knowledge, industry, and ability which those who know him would have expected of him. The product is a building on the details of which neither thought nor expense have been spared, and of the special fitness of which for its purpose there can be no doubt. A critical examination of it would be out of place here.

Suffice it to say, broadly, that, being of one storey with a spacious and lofty basement, and being built on the pavilion principle, it fulfils the acknowledged conditions of permanent hospital arrangement. Its general design, aspect, and site are, moreover, unexceptionable. In completeness also of conception it seems to leave nothing to be desired, there being also space for extension.

Those conversant with the literature of hospital construction and with the actual modifications of which good hospitals are capable, will understand how useless would be any discussion of the details without writing a volume. So I will confine myself to very general statements.

You have, by appropriating thirteen acres to the edifice, exclusive of the Medical School, secured all that can be desired as to space; while on this large area the several required institutions appear to me to be combined with skill and judgment, as regards relative position, contiguity, and separation. The connexion of the scholars' residence with the chief administration block ensures their occupying a social position becoming their claims on your care. Your buildings for the patients who are able to pay for their treatment offer adequate variety of comfort and even of luxury in their design, while your intention to decorate some of the wards of the poorer patients with frescoes, and with flowers architecturally disposed and in abundance, are manifestations as well of your æsthetic care for the sufferers, as for their merely medicinal treatment and of your recollection of Mr. Hopkins's benevolent ideas in these respects. Your kitchen department is not advanced towards completion far enough for me to speak of it fully; but I am satisfied that it will be a model of that part of domestic economy which is so well understand, and so admirably carried out, in the United States.

I will not write of minor arrangements—minor only relatively to the magnitude of the rest—viz., the buildings for contagious diseases, the separation rooms from each ward, the laundries, the rooms for autopsies, the conservatory, and the gardens. I add but a remark as to the nurses' arrangements. The edifice which you have adopted for the home of the nurses will, it is to be hoped, make it possible to carry out your design of inducing women of high education and character to devote themselves wholly to your undertaking. You will thereby train a body of skilled tenders of the sick with an *esprit de corps* such as Miss Nightingale's nurses have in England, or such as the best of the sisters of charity have in Great Britain and the continent of Europe. The principle which you lay down, that they shall, when in the wards, be wholly on duty, and when not on duty be in a united and attractive *home*, may be expected to be fruitful of admirable results to themselves in health and cheerfulness. They will also, I trust, help to show to their sisters, elsewhere, the happiness of skilled nursing as a natural profession and career in medicine for their sex. But here I pause—to go further would be to elaborate panegyric or to discuss details—and neither are now to be desired.

17th. It is to be observed, in connexion with the last remark, that such a hospital as yours, and indeed hospitals of far inferior merit, serve a special purpose as showing the conditions which are deemed desirable for the hygienic care of the sick. Opinions differ as to what are abstractly the best conditions. Critics can always find objects for the exercise of their skill. You can only adopt one plan—you do not say that no other details but yours are good. It is yours only to do that which certainly is good and in a seemly way. I mentioned this because you may be told hereafter, for instance, that the building is too widely spread, and that distances are too great; or that there are no radical objections to two storeys; or that ventilation can be by open windows. Suffice it that, taking all things into consideration, your plans are made so that you believe they cannot be made better, and that, as you execute them, you carefully scan every suggestion that is presented to you, if worthy of notice.

For the purpose of instruction as well as utility, you have adopted a plan of a very comprehensive character, and are executing it in a solid manner, and with a simplicity of æsthetic taste, such as entitles you in these days of laboured ornamentation to public gratitude.

18th. There is another subject on which you invited observation, namely, the relation of the Medical School and of the medical teaching to the University and to the Hospital respectively.

Till the Hospital approaches completion it would be wholly premature to discuss this subject except in the most general manner.

(*a.*) The Hospital is destined to fulfil two great objects. One is the treatment of the sick of Baltimore, which numbers 350,000 inhabitants, though not to the exclusion of other applicants. These will enter in conformity with the conditions of admission which you devise for the common good. With this primary object you allow nothing to interfere. The best accommodation,—the best nursing—the best diet—the best medicine and surgical treatment—the means for securing the fittest staff, whencesoever obtained, are, I understand, your *rôle* in this matter.

(*b.*) The Hospital being primarily for the sick, there is the second great object, viz., that of imparting to others the medical knowledge of your staff, and of giving means of individual observation and study to students. Now, these students are primarily a number of youths selected on these grounds: 1st, of having had a good education; 2nd, of having subsequently followed a defined course of biological study; 3rd, of having good character, and of showing aptitude for medical research in some direction. They will form the nucleus of your students, and reside on the spot as holding "Hopkins' Scholarships." These men will require instruction in all professional subjects, surgical and medical, in anatomy, in medical and pathological chemistry, and in all branches of practice in medicine and surgery. The staff, and others if requisite, will be their teachers. They will require laboratories, workrooms of various kinds, and lecture theatres, besides the clinical lecture rooms, within the Hospital. All these appliances you propose to build on the estate adjoining the Hospital, and to call the building "The Medical School."

Now, it would be greatly to be regretted if some of the advantages of your School, Hospital, and staff could not be made available (under conditions) to many students besides the "scholars." Might there not therefore be a large lecture room, say for 500, in a building so placed on the ground that other structures could be added? And might there not be laboratories, with anatomical and pathological rooms adequate for the scholars and a few more, but also capable of extension, if required and at any time?

It would seem very desirable not to expend more funds than are really necessary for starting the School, for the scholars—so as without delay to establish them—the very nucleus and heart of the scheme. It will be easy to add numbers when the working of the "Honours" department has shown the principle of your institution in operation. Above all, no thought of mere numbers of students should at first influence the arrangements for the scholars. You want apparatus in kind as complete for twenty-five advanced men as for five hundred,—indeed more complete. More space only and assistant teachers are needed for the larger number.

19th. This appears to be the place for making a single observation concerning the relation of this Hospital to the teaching of what is called, for want of a better term, "hygiene." It is not desirable that every student who intends to practise his profession should be required to go through a course of study which would qualify him to be an expert in questions affecting the public health. But it is desirable that an institution such as is now being provided by you should, if possible, give its scholars the opportunity, should they desire it, of acquiring good knowledge of the departments of preventive and of legal medicine. They might use this opportunity either before they graduated as physicians, or, as I would suggest, after that period. In the latter case they should have a distinctive additional title to show that they have also devoted themselves to that department. The details may be considered at another time. Baltimore would offer an excellent field for observation. The drainage arrangements of the city which are not good; the new works constructed on modern principles; the details of construction in your Hospital, and especially those concerned with ventilation and heating; the manufactories and your laboratories,—all would furnish excellent data in the hands of a professor.

I venture indeed to add that your School would be an excellent place for the establishment of such a professor, to be entitled Professor of Comparative National Health—that is, of the general laws which regulate the *health condition of man as man*, under his several circumstances of *climate*, *locality*, *occupation*, *government*, *and race*. The neighbourhood of Washington, where the national statistics are collected and stored, the great medical library there, and the truly national character of such a chair, seem to point to a considerable advantage in founding it in connexion with your School and your laboratories, which may in time be resorted to (as your whole plan implies) by advanced students who desire special and prolonged scientific training in subjects allied to practical medicine, but not well suited to ordinary medical schools. There are men in the States capable of filling this high post, if an adequate endowment can be provided. In a foundation requiring a rare combination of talents, it would be a really national office, for which the vital statistics of the world are now ripe.

In conclusion, I venture to sum up what I have said:

1st, That your scheme for founding a school of highly

educated scientific students, to be devoted to the medical profession, is a real addition to the resources of medical education in the States.

2nd, That such scientific students need also a previous good liberal literary education.

3rd, That such a scheme requires longer time than should, or can, be given by ordinary students.

4th, That the existence of a nucleus of select "Johns Hopkins scholars" does not preclude the extension of some of the advantages of the Hospital and School to larger numbers of ordinary students; and

5th, That the building of the "Medical School" attached to the Hospital though primarily constructed for the "Johns Hopkins scholars" may be made available, under conditions, for a much larger school, and even for ordinary students from other schools, who may desire to be for some purposes, for a limited time, connected with your foundation.

6th, That your Hospital can be not only a first-class institution for the care of the sick, but may be used as a model for training nurses; for lectures on hospital construction, and sanitary details; and as a school for teaching the higher principles and facts of "comparative national health."

All these considerations are materially strengthened by the fact that you are about to devise, in friendly connexion with your trust, a great scheme for promoting the health of the children of your district, by crèches, by hospitals, and by convalescent homes, or otherwise, at a cost, as I understand, of $500,000—and that your relations with the Hospital for the treatment of Mental Diseases will enable you to utilise for scientific purposes great opportunities for psychological study under suitable arrangements.

Gentlemen, I regret that my remarks have extended to so great length, but I beg you to attribute this to my sense of obligation created by the confidence which you have reposed in me, together with the deep respect I entertain for your endeavours and those of your colleagues and coadjutors in the University and Hospital trusts of Mr. Johns Hopkins.

I have the honour to be, Gentlemen,
Most faithfully yours,
(Signed) Henry W. Acland,
Regius Professor of Medicine in the University of Oxford, F.R.S.

Ought Boys to be Allowed to Smoke Tobacco?—A French anti-tobacco society has been petitioning M. Lepère to forbid the sale of tobacco to boys under the age of sixteen, and to prohibit them from smoking in taverns and out-of-door *cafés*. His reply to them states that if the effects of tobacco on youths were as noxious as those of alcohol, legislative interference would be very desirable; but he is at a loss to see how the prohibitions suggested could be advantageously enforced, since a boy detected in purchasing tobacco might pretend to be procuring it for his father, and fines for smoking would practically fall on the parents, for it was obvious that they could not perpetually watch over their children's behaviour.

Vicissitudes in Medical Payments.—A physician in high position, who had usually some trouble in obtaining payment from one of his patients who was a financier, received from him one day an agreeable surprise in the form of a charming letter in which he apologised for having made him wait so long, and informed him that instead of recouping his careful attention by vile dross, he presented him with a number of shares in a new society which he had founded. The doctor accepted the shares, signing a receipt, but as these never brought him any dividends, he deposited them in his strong box and quite forgot all about them. Quite lately they were suddenly called to his mind on his receiving a summons to attend at a court of justice, there to hear his condemnation to pay 10,000 fr. for unpaid deposits on the shares, the society having fallen into bankruptcy. In another instance a medical practitioner received from his patient in payment of his services a cask of white Barsac wine. After a while the donor failed, fell ill, and died. On examination of his books there was found an entry of the Barsac wine, valued at 300 frs. This the doctor was obliged to pay, and on claiming payment for his own medical services he was informed that a year had elapsed since they were rendered, and payment was therefore not recoverable.—*Union Méd.*, April 17.

FROM ABROAD.

The New Chair of Pathological Anatomy at Paris.] M. Ferré's projected addition of a second chair of Pathological Anatomy to the Paris Faculty has excited general opposition in both the political and medical press. Still, the *Union Médicale* observes, the vote of the requisite 27,000 fr. will be carried, the chair will be created, and its future occupant (M. Cornil, also a Deputy, it is said) will be installed in it, little caring for the reception by his colleagues which awaits him. Since we last adverted to the subject, the report of Prof. G. Sée on the part of the Faculty has been published *in extenso* (*Union Méd.*, April 15 and 17); and certainly it shows that the Faculty has been subjected to a most high-handed procedure by the democratic Minister of Public Instruction. The Faculty does not deny that the Minister has the legal right to institute the chair *proprio motu*, and to nominate its first occupant; but it points out that even under the Empire this right was only once exercised, in 1862, in the person of so eminent a man as M. Rayer. Since then the opinion of the Faculty had been always taken on the expediency of erecting new chairs, and as to the respective merits of the candidates. The Republic has gone a step further, and has left to the Faculty the initiative of all innovations and the choice of candidates. The pretext for this solitary exception, the Faculty maintains, is of the most shadowy description, and is not even founded on fact. The teaching of pathological anatomy is amply provided for, and that in the most practically useful manner, in connexion with clinical teaching. It seems strange, indeed, to call into question the value of this kind of instruction, which has always constituted one of the boasts of the Paris school. "Thanks to this method of combining rigorous investigation during life with minute inspection of the damaged organs, it is that our great masters, such as Corvisart, Dupuytren, Laennec, Cruveilhier, etc., reached an eminence never before attained by medical genius. Without his clinic, Laennec never could have conceived the idea of auscultation, and without the investigation of lesions he never could have demonstrated it." At the present time the study of the changes which take place in the tissues does not consist in mere description, microscopical investigations taking place in the laboratories of the clinics, these being pursued with great assiduity and entire competence. Autopsies at the various clinics are methodically performed, and the preparations publicly demonstrated.

It is not, in fact, the reporter maintains, the object of this innovation, as alleged, to supply facilities for the performance and demonstration of autopsies, which in fact already exist at the different clinics, but to introduce what is termed the "German system," by which the clinical professor has to hand over the cadaver to the professor of pathological anatomy—a dislocation rather than a division of labour, and the disjunction of questions indissolubly connected, the cause and mechanism of the disease, and the cause and mechanism of death. Even in Germany this disjunction is beginning to be thought an error; and in the new organisation of the Clinical Institute at Munich we find ten chairs without one of pathological anatomy. The following are the conclusions of Professor Sée's report:—

"1. The creation of new institutions without the Faculty having been consulted not only constitutes a violation of consecrated custom, but may prove a positive prejudice to the comprehensiveness of the studies, to the object of the curricula, and to the teaching, at once practical and scientific, of the Faculty. 2. The direct nomination of a professor without our preliminary advice being taken would be a great invasion of the prerogatives of the Faculty, and would deliver it up to an arbitrary rule which would prove most compromising for the future of its scientific institutions. 3. The new chair is proposed to be founded for the daily practice of autopsies, which exists from time immemorial. It has always been a true predilection for the school of Paris, and is marked by the manifestly practical character which has been derived. 4. Morbid anatomy is, moreover, rigorously taught, and, so to say, cultivated, in the thirteen general and special clinics. Autopsies, dissections, and microscopical examinations are there made daily, under the direction of the professors,

by the *chefs* of the clinics and laboratories, and the preparations are exhibited and demonstrated to the students. There is an actual luxury of anatomical demonstrations. 5. A new chair, *ex cathedrâ*, would be more than a superfœtation. It would constitute a real danger by removing from the clinic the principal interest of the lecture, and in separating scientific observation. The verification of diagnoses would become impossible, still more the establishment of the parallelism between the post-mortem lesions and the symptoms observed during life. The function of the clinic would become sterile, and that of morbid anatomy entirely arbitrary. 6. The establishment of such a chair in a hospital would not fail to give rise to executive difficulties, questions of hygiene, etc.; and, supposing these to be obviated, we should inevitably have arise between the professors of medicine and pathological anatomy—neither of whom would think slightly of his prerogatives and his duties—perpetual conflicts. The clinic, with its anatomical control, would exist no longer as it has flourished with the greatest success for half a century, to the great benefit of students and of science. 7. For all these reasons we unanimously protest against the creation of this new chair, and still more strongly to its installation in a great hospital."

Medical Ethics.

The Massachusetts Medical Society has just elaborated, after two years' deliberation, a new code of medical ethics in place of that of the American Medical Association, and the *Boston Medical Journal* prints it in the number for March 11. We do not find that it suggests any improvement upon the arrangements usually spontaneously observed among men practising their profession honourably. It is, however, very concise, and thus far preferable to what the *Boston Journal* terms the "pompous and ponderous garrulity" of its predecessor. Upon the subject of *fees* the 7th article of the code states: "A fee table has a local application, and is designed to indicate a fair or average amount due for services. But if the patient fully understands it beforehand, a physician is at liberty to place any value he sees fit upon his services. It is then at the patient's option to decline them or to pay their price. A physician should be considerate to the poor. A patient in moderate circumstances should not be called upon to pay a fee unusually large for the service rendered, without a previous explicit understanding. A physician, if able, should offer to pay the medical attendant of himself or family. Unless by special agreement, a physician attending or acting for another should receive the fees. Among obstetricians a rule obtains that the interval between the birth of the child and of the placenta halves the service and the fee. A fee should be charged for a medical certificate or paper of value to the applicant—connected, for example with absence or exemption, life insurance, pension papers, etc., except the usual certificates of vaccination and death."

Skin-Grafting.

At a meeting of the Philadelphia Medical Society (*Phil. Med. Times*, February 28) some interesting observations upon this were made. Dr. Nancrede, from considerable experience in skin-grafting, had come to the conclusion that when the grafts are successful the new epidermis is more apt to break down and ulcerate than surfaces cicatrised in the ordinary manner. In cases of leg ulcer he had repeatedly seen the new surface break down and disappear very rapidly after grafting. Dr. Levis said that he had adopted this procedure very many times, and had no doubt that it often is of great service in the healing of large ulcerated surfaces. He called attention to the fact that there were some peculiar conditions of the granulating surface requisite to insure the development of the grafts. In some apparently healthy surfaces they will not grow, while in rupial ulcers and other unhealthy sores they will sometimes succeed, and yet will fail in simple ulcerations. He referred to a case in which the scalp of a young woman had been torn off by machinery, and a perfectly clean granulating surface followed, upon which great numbers of grafts were placed, but none would germinate. When the grafts do succeed it is remarkable how much they stimulate the surface of an old ulcer. In an ulcer with overlapping edges, such as are often seen in old leg-ulcers, it was formerly the custom to cut these edges away; but he had repeatedly seen, after the application of the grafts, so much stimulation as to make the surface level with the surrounding skin, the edges disappearing. It is a curious fact that, no matter what the shape of a chronic ulcer is originally, it becomes nearly oval before it heals. However irregular it may have been, it rarely heals before assuming this form. In the cicatrising of large surfaces skin-grafts are applied to good purpose. In the case of a man whose back was burned by sleeping near a lime-kiln, the entire back was made to quickly commence healing by skin-grafting. A large number of grafts were inserted, and were spreading nicely, when the man took a fever, and every one disappeared by rapidly destructive ulceration. The surface was grafted again with complete success.

As to the manner of taking the grafts, his plan was to introduce a fine needle through the outer layer of the skin, and snip off the minute portion elevated by means of iris scissors, removing only a small point of cuticle and some of the superficial dermoid layer. He had noticed no difference whatever in the rapidity of growth in the large and small grafts. In the process of grafting, the small pieces of integument are simply laid, with the cuticle side uppermost, upon the granulations, the surface being rather dry. After leaving the part uncovered for several hours, it is covered with waxed paper to protect it from the bandage. The first phenomenon noticed is the disappearance of the graft. The little piece of cuticle becomes detached, and is lost in the discharges from the surface of the ulcer, while the true dermoid material remains. Following this, in about two days, a little lilac-tinted spot is seen, considerably below the level of the granulations. This spot increases, and its subsequent growth is very evident. Dr. Levis regards the plan of leaving the ulcer uncovered for some hours after the operation as much better than immediately applying any kind of dressing. In reply to a question, he stated that it did not seem to make any difference whether the grafts were taken from the same individual or another. He had frequently transplanted grafts from the integument of amputated legs and arms, with success. He had never seen any bad results from this practice; but could not recommend its general adoption for fear of specific infection. Dr. Turnbull preferred covering the graft, and agreed with Dr. Hayes, who, after applying adhesive plaster and bandage, left it undisturbed for four days, as before this time it is impossible to say whether the graft will take or not.

Sims' Speculum always at Hand.—The index and middle fingers of the right hand may be used as a perineal retractor in place of the ordinary Sims' speculum. They may be introduced with the patient in Sims' latero-prone position, the operator standing at the back of the patient, on the side of the table, in exactly the position of the assistant who holds the speculum in the ordinary way. In this manner the cervix and vagina may be exposed almost as well as by the speculum. This method may be of great use when a speculum is not attainable, as in the application of the tampon in sudden hæmorrhage, or in consultations at a distance.—*Chicago Med. Gazette.*

Action against an Advertiser.—A Mons. Gardy, a Paris *pharmacien*, who is the proprietor of a pharmaceutical product termed "huile de Gabian," was summoned before the Tribunal Civil de la Seine by M. Doin, the publisher of the *Bulletin de Thérapeutique*. It appears that some time since a favourable article on his oil appeared in the *Bulletin* from the pen of M. Blache, whereupon Gardy reprinted the article, and, enclosing it in a wrapper which was a facsimile in colour and typography of the *Bulletin de Thérapeutique*, forwarded it to every practitioner in France. The intention was evidently to make it appear that it was sent by the proprietors of the *Bulletin*, which is edited by Professors Bouchardat, Le Fort, and Potain; and in fact the copies which could not be delivered were returned by the post-office, not to M. Gardy, but to the office of the *Bulletin*. This the Court deemed a procedure derogatory to the reputation of the journal, as leading to the belief that it had undertaken the advertising of this preparation for pecuniary consideration. It therefore prohibited Gardy from circulating the paper in this manner under pain of having to pay 25 fr. for every copy so circulated. It also gave M. Doin 200 fr. damages, and ordered Gardy to insert the judgment in two medical journals to be chosen by Doin, each insertion not to cost more than 150 fr.—*Union Méd.*, April 22.

CLASSIFICATION OF SKIN DISEASES.

The following grouping of maladies specially affecting the skin is by Dr. Bulkley, of New York. Meantime, we publish it simply as forwarded to us, and without comment:—

Lesions of the Skin.

A. *Primary Lesions.*	B. *Secondary Lesions.*
1. Macula; spot, macule.	1. Squama; scale.
2. Papula; papule.	2. Crusta; crust.
3. Vesicula; vesicle.	3. Fissura; fissure.
4. Bulla; bleb.	4. Excoriatio; excoriation.
5. Pustula; pustule.	5. Ulcus; ulcer.
6. Pomphus; wheal.	6. Cicatrix; scar.
7. Tuberculum; tubercle.	
8. Phyma; tumour.	

Classification of Diseases of the Skin.

Class I. Morbi cutis parasitici. Parasitic Affections.
„ II. Morbi glandularum cutis. Glandular Affections.
„ III. Neuroses. Neurotic Affections.
„ IV. Hyperæmiæ. Hyperæmic Affections.
„ V. Exsudationes. Exudative or Inflammatory Affections.
„ VI. Hæmorrhagiæ. Hæmorrhagic Affections.
„ VII. Hypertrophiæ. Hypertrophic Affections.
„ VIII. Atrophiæ. Atrophic Affections.
„ IX. Neoplasmata. New Formations.

Class I.—Morbis cutis parasitici. Parasitic Affections.

A. Vegetable.
- 1. Tinea trichophytina (or trichophytosis) (*parasite—Trichophyton tonsurans*)
  - corporis (or tinea circinata).
  - capitis (or tinea tonsurans).
  - barbæ (or sycosis parasitica).
  - cruris (or eczema marginatum).
- 2. Tinea favosa (or favus) (*parasite—Achorion Schœnleinii*).
- 3. Tinea versicolor (or chromophytosis) (*parasite—Microsporon furfur*).

B. Animal.
- 1. Phthiriasis (or pediculosis)
  - corporis
  - capitis
  - pubis

  (*parasite—Pediculus*).
- 2. Scabies (*parasite—Acarus scabiei*).

Class II.—Morbi glandularum cutis. Glandular Affections.

A. Diseases of the Sebaceous Glands.
- I. Due to faulty secretion or excretion of sebaceous matter.
  - 1. Acne sebacea
    - oleosa
    - cerea
    - cornea

    (or seborrhœa).
    - exsiccata (or xeroderma).
  - 2. Acne punctata
    - nigra (or comedo).
    - albida (or milium).
  - 3. Acne molluscum (or molluscum sebaceum).
- II. Due to inflammation of sebaceous glands with surrounding tissue
  - 4. Acne simplex (or vulgaris).
  - 5. Acne indurata.
  - 6. Acne rosacea.

B. Diseases of the Sweat Glands.
- I. As to quantity of secretion.
  - 1. Hyperidrosis.
  - 2. Anidrosis.
- II. As to quality of secretion.
  - 3. Bromidrosis.
  - 4. Chromidrosis.
- III. With retention of secretion.
  - 5. Dysidrosis.
  - 6. Sudamina.

Class III.—Neuroses. Neurotic Affections.

1. Zoster (herpes zoster or zona).
2. Pruritus.
3. Dermatalgia.
4. Hyperæsthesia cutis.
5. Anæsthesia cutis.
6. Dystrophia cutis (or trophic disturbances).

Class IV.—Hyperæmiæ. Hyperæmic Affections.

A. Active.
- 1. Erythema simplex
  - idiopathicum.
  - traumaticum.
- 2. Roseola.

B. Passive.
- 1. Livedo mechanica.
- 2. Livedo calorica.

Class V.—Exsudationes. Exudative or Inflammatory Affections.

A. Induced by Infection or Contagion.
1. Rubeola (or measles).
2. Rubella (or rötheln).
3. Scarlatina.
4. Variola.
5. Varicella.
6. Vaccinia.
7. Pustula maligna.
8. Equinia (or glanders).
9. Diphtheritis cutis.
10. Erysipelas.

B. Of Internal or Local Origin.
- I. Erythematous.
  - 1. Erythema
    - multiforme.
    - nodosum.
  - 2. Urticaria.
- II. Papular.
  - 3. Lichen
    - simplex.
    - planus.
    - ruber.
    - scrofulosus.
  - 4. Prurigo.
- III. Vesicular.
  - 5. Herpes
    - febrilis.
    - iris.
    - progenitalis.
    - gestationis.
- IV. Bullous.
  - 6. Hydroa.
  - 7. Pemphigus
    - vulgaris.
    - foliaceus.
  - 8. Pompholix (or cheiro-pompholix).
- V. Pustular.
  - 9. Sycosis.
  - 10. Impetigo.
  - 11. Impetigo contagiosa.
  - 12. Ecthyma.
- VI. Erythematous, papular, vesicular, pustular, etc.
  - 13. Eczema.
  - 14 Dermatitis
    - calorica.
    - venenata.
    - traumatica.
- VII. Squamous.
  - 15. Dermatitis exfoliativa (or pityriasis rubra).
  - 16. Psoriasis.
  - 17. Pityriasis capitis.
- VIII. Phlegmonous.
  - 18. Furunculus (furunculosis).
  - 19. Anthrax.
- IX. Ulcerative.
  - 20. Ulcus
    - simplex.
    - venereum.
  - 21. Onychia.

Class VI.—Hæmorrhagiæ. Hæmorrhagic Affections.

1. Purpura
   - simplex.
   - papulosa.
   - rheumatica (or peliosis rheumatica).
   - hæmorrhagica.
2. Hæmatidrosis (or bloody sweat).
3. Scorbutus.

Class VII.—Hypertrophiæ. Hypertrophic Affections.

A. Of Pigment.
1. Lentigo.
2. Chloasma.
3. Melanoderma.
4. Nævus pigmentosus.
5. Morbus Addisonii.

B. Of Epidermis and Papillæ.
1. Keratosis pilaris (or lichen pilaris).
2. Ichthyosis.
3. Cornu cutaneum.
4. Clavus.
5. Tylosis (or callositas).
6. Verruca
   - vulgaris.
   - senilis.
   - acuminata.
   - necrogenica.

C. Of Connective Tissue.
1. Scleroderma.
2. Sclerema neonatorum.
3. Morphœa.
4. Elephantiasis (Arabum).
5. Dermatolysis.
6. Frambœsia (or yaws).

D. Of Hair.
1. Hirsuties.
2. Nævus pilosus.

E. Of Nail.
1. Onychogryphosis.
2. Onychauxis.

Class VIII.—Atrophiæ. Atrophic Affections.

A. Of Pigment.
1. Albinismus.
2. Leucoderma (or vitiligo).
3. Canities.

B. Of Corium.
1. Atrophia cutis
   - propria.
   - linearis (or striæ atrophicæ).
   - maculosa (or maculæ atrophicæ).
2. Atrophia senilis.

C. Of Hair.
1. Alopecia.
2. Alopecia areata.
3. Trichorexis nodosa (atrophia pilorum propria, or fragilitas crinium).

D. Of Nail.
Onychatrophia.

Class IX.—Neoplasmata. New Formations.

I. *Benign New Formations.*

A. Of Connective Tissue.
1. Keloid.
2. Fibroma (or molluscum fibrosum).
3. Xanthoma (xanthelasma or vitiligoidea.

B. Of Granulation Tissue.
1. Lupus
   - vulgaris
   - erythematosus.
2. Rhinoscleroma.
3. Scrofuloderma.
4. Syphiloderma.

C. Of Blood-vessels.
1. Nævus vasculosus.
2. Angioma (or telangiectasis).

D. Of Lymphatics.
1. Lymphangioma cutis.
2. Lymphadenoma cutis.

E Of Nerves.
Neuroma cutis.

II. *Malignant New Formations.*

1. Lepra
   - tuberosa
   - maculosa

   (or elephantiasis Græcorum).
2. Carcinoma
   - epitheliomatosum (epithelioma and rodent ulcer).
   - papillomatosum (or papilloma).
3. Sarcoma
   - idiopathicum.
   - pigmentosum (or melanosis).

ON SOME ANALOGIES BETWEEN THE NERVOUS SYSTEM AND THE ELECTRIC TELEGRAPH.

(*Continued from page* 434.)

To enable us to judge of the analogy between the plants and working, so to speak, of the two systems—that is, the general distribution and arrangement of their materials, as well as of their function or *modus operandi*,—I quote the following passage from Carpenter's "Principles of Human Physiology":—

"The peculiar vital endowments of the nervous tissue can only be exhibited when the two distinct forms of it (the sensory and motor) are united in such a manner as to constitute a nervous system. This system in its simplest condition is composed of an *expansion of nerve-fibres* over the surface of the body, or of some part of it; of an *afferent trunk*, formed by the junction of those fibres, which proceeds towards a ganglion, wherein it terminates; of a *ganglionic centre*, or neurergon (to coin a word), containing vesicular nervous matter with which the nerve-fibres come into connexion; of an *efferent trunk*, issuing from the ganglion and proceeding towards the muscles; and of a *plexus of fibres*, into which that trunk subdivides, and which comes into intimate relation with the elements of the muscular tissue. Such an apparatus, altogether designated as the nervous circle, seems to constitute the entire system of some among the lower animals.

"The *modus operandi* of such a system is as follows:—By contact, pressure, or some other form of mechanical agency, an *impression* is made upon the peripheral extremities of the afferent nerves, and this impression, or rather the change induced by it in the condition of the nerve-fibres, is transmitted by the nerve-trunk to the central ganglion. In this ganglion the influence *transmitted* by the afferent trunk excites a reactive change, the occurrence of which is indicated by the *transmission* along the *efferent* nerves of an influence, which, being distributed to the muscular substance, excites it to *contraction*. All this takes place so instantaneously, that the movement follows immediately on the application of the stimulus. Actions of this kind, which do not involve sensation as one of their conditions, and which are executed in direct and unconscious respondence to external stimuli, are usually termed reflex or excito-motor."—Pages 343-4.

As an analogue to this, we may take one of the simplest forms of the electric telegraph—that, for instance, employed by a merchant or manufacturer as a means of communication between his office in town and his store or manufactory in the country. The afferent communications, those going *to* the store, consist of messages and orders *ab externo*, imparted to the clerk or telegraphist in attendance at the office, and transmitted by him through the afferent trunk-wire, or wire leading to the store, where it joins the battery or ganglion which supplies the electricity or working power of the arrangement.

In reply to these messages, appropriate answers are immediately returned through the *efferent* or *out*-carrying wire—although, in fact, the same wire is available for carrying the impression either way. And as soon as possible thereafter, the work required to be done—the muscular action, to continue the comparison—is carried through.

While telegraphing is going on, it is necessary that a free passage for the electricity should be allowed, and a vent or exit for it should be given after it passes through the instrument; and this is effected by having a terminal wire from the instrument, in connexion with a copper plate sunk in the earth, or by having the wire attached to some metallic substance going under the earth, such as a gas-pipe that is in connexion with the underground service pipes. When receiving a message, the telegraphist, by the turn of a handle, makes this connexion; when sending one, he breaks or undoes it, while the receiver lets the current at *his* end run to earth by a similar arrangement.

You will observe that in this analogy, the advantage in point of simplicity and economy of working *seems* to be with the telegraph, inasmuch as one single wire only is required, while, according to the theory of Dr. Marshall Hall and others, two distinct sets of nerves—the excito-motor and the motor—are required in the animal economy. This discrepancy alone is sufficient to make one hesitate before accepting the current physiological views on the subject, believing, as physiologists do, that no human mechanism can exceed, or even rival, in adaptation to its object and in simplicity of design, that of the human body. In the case supposed, one wire can carry messages both ways almost at the same instant, and by improved modes of working the telegraph—the duplex system, for instance—two (and probably more) messages can be at the same time sent and replied to by means of the same wire, without the least confusion or clashing with one another.

I cannot doubt that the animal system possesses quite as wonderful a power. The very fact of the nervous fibrilla of the voluntary muscles not terminating by individual dispersion, but coalescing in the form of loops, as physiologists describe them as doing, and so returning to the trunk nerves from which they came, seems to confirm the view that whatever excito-motor or peripheral irritation may initiate muscular action, it can only go along the very same nerves that produce this action.

As confirmatory of this view, so far, I shall give a quotation from Dr. Tod, in his "Cyclopædia of Anatomy and Physiology," vol. iii., page 721B:—

"To the term 'excito-motory' of Dr. Hall there appear to me to be several serious objections. First, this term implies that the excitation of motion takes place in no other way than by a mechanism similar to that by which these movements are produced. Secondly, it denotes the existence of a peculiar excito-motory power different from the ordinary *vis nervina*, the agent in all nervous phenomena, as if this force were not capable of being roused into action, at one time by a mental stimulus, at another by a physical stimulus, or at a third by a mental and physical stimulus united. Persons get into the habit of using the terms 'excito-motory power,' 'excito-motory phenomena,' as if this power or these phenomena were something quite peculiar, quite *sui generis*, and limited to a special part of the nervous system, losing sight of the real truth that they differ from voluntary actions only in their mode of excitation, that is, by a physical and not by a mental stimulus. Thirdly, it limits the reflecting power of the nervous centres—that is, the propagation of the change induced by the application of a physical stimulus at the periphery—to reflection from *sensitive* to *motor* nerves. Now, there are many facts which show that reflection may take place from a sensitive to another sensitive nerve, and many of the phenomena of sympathy admit of no other explanation excepting on this principle, and I am by no means prepared to affirm that reflection may not take place from motor to sensitive nerves under circumstances of an exalted polarity of the nervous centres."

Another difference that must strike one in the working of the two systems is with respect to the disposal of the effete electricity, after it has done all its work. In the telegraph it is run to earth. What becomes of it in the animal system? It does not appear to be set free in the muscles or the substance of the body, for it is barely possible to detect its presence in the minutest quantity by the most delicate electrical tests that can be applied. The probability is that it is set loose in the form of heat, and thus contributes to the keeping up of the temperature of the body. The nerves would seem to have the power of developing the force with which they are charged, into the different forms of which we know that electricity is susceptible—heat, chemical action, and even light. By means of the vaso-motor nerves, which are in continual action, a constant stream of heat would thus be sent to all parts of the body, along with that conveyed by the blood itself of the arterial capillary system.

An important and indispensable adjunct to all telegraphic stations is what is called a "test-board" or "test-box," though the name indicates only one of the important uses to which it can be put. On a readily accessible part of the telegraphic room or hall there is attached to the wall a large box, a few inches deep, covered by a mahogany board furnished with a number of appropriately labelled handles or terminals (as they are called), by means of which the various wires passing into or through the office can be (within the box) connected or disconnected with respect to each other or the earth, in such a way as to enable the operator to detect, by the working of the testing

instruments, the locality of a disconnexion or break in any of the wires, or to restore, as speedily as possible, communication with a distant station which had been interrupted, by directing one or more of his circuit correspondents to switch or shunt the circuit on to a neighbouring line, so as to cut off, for the time, the faulty portion of the circuit.

In this arrangement, one cannot help seeing a remarkable analogy to the medulla oblongata in the animal system, which is recognised by modern physiologists as the central point where all the important nerves of the body, whether cerebral or cerebellar, spinal or sympathetic, motor or sensory, either originate or intercommunicate with each other. In fact, minute anatomy reveals a decussation or intermingling of their fibrilla with each other. It is doubtless through means of this *sensorium commune*, or *great central junction of vitality*, placed, as it is, midway between the brain and the body, that the mind and the body can act and react on each other as they do. The nervous vagus, which has a certain command over the heart and other vital organs, the vasor-motor nerves, the great sympathetic or organic system of nerves, and in short all the important nerves of the body, have branches of fasciculi connecting them directly or indirectly with the medulla oblongata.

The unconscious volition, to use an apparently contradictory phrase, springing from the immediate requirements of the system, seems to be the means—corresponding to the telegraphic operator—that causes the transmissions, or at least many of them, through the medulla oblongata.

In all well-regulated telegraphic offices a block of business is not likely to take place, but through neglect of the proper regulations and precautions of the department it might occur, and cause great trouble and inconvenience. In such an emergency, I believe, the course to be followed would be for the clerk in charge to shut off his machine from the circuit, and allow the glut of messages to run to earth till he had an opportunity of coming to an understanding with his co-telegraphists at the other stations in the circuit.

In like manner, in the human system, a block or congestion may take place in the medulla oblongata in consequence of some chronic nervine irritation set up in it through mental trouble or derangement interrupting or replacing the normal action which the system requires. Headache, malaise, and general flagging of the bodily functions are the results. The great relief produced by the application of a blister to the nape of the neck—that is, in the neighbourhood of the medulla oblongata—in these circumstances may be accounted for by its drawing or shunting off the superabundant nervous energy, and running it to the periphery—or to earth, so to speak,—where it can expend itself in repairing the breach of tissues caused by the vesication.

If I had sufficient knowledge of the mysteries of the electric telegraph, I might go on drawing many more of these analogies, but I am afraid you may think there has been enough of wire-drawing already, and I shall now finish by our looking for a little at the subject from another point of view.

(To be continued.)

The Medical Act Amendment Bills.—A special report by the Select Committee to whom the several Medical Bills were referred has been published. It is as follows :—"Your Committee are of opinion that, in consequence of the approaching dissolution of this present Parliament, it is not possible to complete the evidence which bears on the Bills referred to them. That the Bills be therefore reported to the House without amendment, together with the minutes of evidence taken before them, and an appendix."

Edinburgh University Prizes.—At the Edinburgh University, in the Faculty of Medicine, the following awards have been made during the past session:—The Senior Mackenzie Bursary was awarded to Mr. Sheridan Delépine, and the Junior Bursary to Mr. A. Wood, as the students in the senior and junior classes of practical anatomy who respectively displayed the greatest industry and skill at their work during the winter session. The John Aitken Carlyle's Bursary in Anatomy and Physiology, of £25, has been awarded to Mr. J. Mackie White, M.A.; and the Bursary in Anatomy and Chemistry, of £25, to Mr. T. A. W. Fulton—being the students who showed superior proficiency in the class examinations in the above subjects.

GENERAL CORRESPONDENCE.

SCIENCE IN THE *TIMES*.

Letter from a Foreign Correspondent.

[To the Editor of the Medical Times and Gazette.]

Sir,—The *Times* a few days ago favoured its readers with a leader on "Flukes in Sheep." Mr. Buckmaster, the well-known lecturer on cookery and popular science, had been lecturing at Grantham on sheep-rot, and had suggested that some knowledge of animal parasites might be taught in village schools. The *Times* remarks: "He (Mr. Buckmaster) does not notice the fact that there are plagues that concern the poor children even more immediately. Half a dozen creatures of great scientific interest infest the scalp, burrow into the skin, suck the blood, and poison it too, besides the more terrible ones that effect a lodgment in the stomach and sap the foundations of life" (*sic*). Now, in England, putting aside fleas and bugs, and gnats and harvesters, and the *acarus folliculorum*, which the leader-writer in the *Times* surely did not refer to in the awful paragraph above, there are altogether only four "creatures" which plague humanity. Of these only one, the *pediculus capitis*, "infests the scalp." As far as is known, it does not "burrow into the skin," though it "sucks the blood"; nor do two out of the three other parasites just referred to, the *pediculus corporis* or *vestimentorum*, and the *pediculus pubis*, or crablouse. The fourth parasite, the *acarus scabiei*, or itch-insect, does "burrow into the skin" to make a nidus for its eggs and young ones. We do not know that any of the four can be said, without exaggeration, to "poison the blood." Those "more terrible ones that effect a lodgment in the stomach and sap the foundations of life," exist only in the leader-writer's imagination. There is no parasite, except the vegetable sarcina, which lives in the stomach. The *ascaris lumbricoides* and the *tænia solium* and other rarer species of *tæniæ* live in the small intestines, the *ascaris vermicularis* in the colon and rectum. The presence of any of these worms in the stomach is accidental and unusual. As to their sapping the foundations of life, it is well known that the first evidence of the existence, say, of a tapeworm is often obtained from the motions, and that without the passage of segments we can only surmise that there may be one, but cannot be sure. People in the most blooming health may suffer from worms, and the *ascaris vermicularis* may almost be considered an essential accompaniment of childhood. On the whole, your readers, who, I trust, will pardon me for telling them what they knew before, will probably agree with me that a great journal like the *Times* might give a little more care to the preparation of its scientific articles. The *Times* has lately inclined to support or to give a hearing to anti-vaccinationists: in the article from which the passage here commented on was taken, it implies that nothing reliable is known about the *distoma hepaticum* of sheep: and it reviews from time to time, in large print, popular works on medical topics, which the profession at large would scarcely consider of the transcendent merit that entitles a book to such a position in its columns. Might not the "leading journal" be more scientific, more accurate, and more discriminating?

April 19. I am, &c., M.D.

Sanitary Condition of St. Petersburg in 1879.—Dr. Hübner reports that the sanitary condition of St. Petersburg was much more satisfactory in 1879 than in the two former years, the mortality having been only 39 per 1000, while in 1877 and 1878 it was 46 per 1000. Still, 1180 persons died of small-pox during 1879, while the normal annual number of deaths from this disease is only 100. Even the mortality from small-pox in 1879 was small compared with that of 1872 and 1843, when more than 4000 deaths occurred from it. Typhus was also prevalent in 1879—purple typhus, a variety little known before, being frequent. Dr. Hübner attributes the prevalence of typhus to the agglomeration of the poor in St. Petersburg, great numbers occupying the same room, packed like herrings in a barrel. —*Union Méd.*, April 20.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, APRIL 7.

W. S. PLAYFAIR, M.D., F.R.C.P., President, in the Chair.

FIBROID POLYPUS.

DR. BANTOCK showed a large uterine polypus weighing one pound three ounces in its fresh state, removed from a woman, aged fifty-one, by the écraseur. Symptoms had existed six years, but the tumour had only been discovered three weeks before, on the occurrence of retention of urine.

MULTIPLE VESICAL CALCULI, THE SEQUEL OF PROLAPSUS UTERI.

Dr. GALABIN showed twelve large calculi and about fifty small ones, which he had removed by vaginal lithotomy from the bladder of a woman aged sixty-one, with the assistance of Mr. W. F. R. Lane. They were of lithic acid, and weighed eight ounces and three-quarters, the largest measuring one and a half by one and a quarter by one inch. Both uterus and bladder were prolapsed completely outside the body, and had not been returned for ten years. Symptoms referable to the bladder had only existed six months. The patient was crippled, and the thighs almost anchylosed from rheumatoid arthritis. The wound was closed at once by silkworm gut sutures, the procident mass returned, and kept up by an elastic ring. At the end of ten days union was perfect. The stones had obviously been prevented from escaping, as usual, while small, owing to the position of the bladder, with its orifice uppermost.

Dr. ROPER mentioned a case in which he had removed calculi by dilating the urethra, and asked why Dr. Galabin had chosen lithotomy.

Dr. AVELING thought that lithotomy was the preferable operation in such a case, and said that the risk of hæmorrhage might be avoided if the sutures were carried through the mucous lining of the bladder. He had seen two cases in which the urethra had been completely destroyed by dragging calculi through it.

Dr. R. BARNES said that dilatation of the urethra, or lithotrity, was most suitable for small or moderate calculi; lithotomy for a case like the present.

Mr. DORAN had removed a calculus half an inch in its narrowest diameter from the bladder of a girl aged nine, by dilating the urethra. But when calculi were numerous he considered lithotomy preferable.

Dr. ROGERS believed that Dr. Galabin had taken the best and wisest course. He had met with a case in which a large calculus was encrusted on a hair-pin. This was crushed and brought away through the urethra without much mischief following.

Dr. GALABIN had chosen lithotomy on account of the number and size of the stones, and the great amount of inflammation present. His experience was that, if the urethra were dilated much beyond the size of the index finger, more or less incontinence of urine was apt to remain permanently. No disturbance had followed the operation, but the patient was relieved immediately from her suffering.

MISSED ABORTION.

Dr. ROPER showed an ovum expelled entire, together with a large clot. This occurred seventy-four days after marriage, but the ovum appeared to be older than this. Twenty-six days before marriage the patient had had phlegmasia dolens, and he thought that the clot might have been the cause of the death of the ovum and of the phlebitis at the same time.

DOUBLE MONSTER.

Dr. GODSON showed for Dr. Murphy, of Sunderland, a double monster, consisting of two female children united by the front of thorax and upper part of abdomen. The first head was delivered by forceps, body of first child extracted by hooking fingers over breech, then feet and body of second, and finally second head. Both were born alive and breathed for a few minutes.

REMOVAL OF FIBROUS OUTGROWTH FROM THE FUNDUS UTERI—RECOVERY.

Dr. GODSON read this paper. The patient, aged thirty, was under the care of Mr. Alfred Cooper. She suffered from great difficulty in micturition and defæcation, and such depression of spirits that life had become a burden. For the last five years the menstrual flow had become diminished in quantity and clotted, still lasting an entire week. A hard nodular tumour was found reaching almost as high as the umbilicus, movable separately from the uterus. The anterior wall of the uterus appeared also to be in a fibroid condition. The probe entered two inches and three-quarters. The patient being very anxious for an operation, the author sanctioned it, having warned her that considerable risk to life would be incurred thereby, and that cure of the symptoms was not certain. Mr. Spencer Wells concurred in this opinion, and performed the operation on December 10, under carbolic spray. The pedicle of the fibroid tumour, attached to the right posterior angle of the uterus, was fixed by a temporary clamp. On drawing up the clamp to transfix the pedicle, the strain was so great that the pedicle tore away from the uterus, which receded into the abdomen. So little hæmorrhage, however, occurred, that no means to arrest it were found necessary. The patient recovered without adverse symptoms. All her troubles and low spirits had disappeared since the operation.

REMOVAL OF UTERINE FIBROIDS BY LAPAROTOMY.

Mr. KNOWSLEY THORNTON contributed a paper on this subject. The author not only regarded the removal of uterine fibroids by abdominal section as justifiable in certain cases, but believed that the future of these operations would be in no way second to that of ovariotomy. The objections to operating by laparotomy for fibroids were—1. Less fatality of fibroids when left alone, as compared with ovarian tumours. 2. The greater frequency of their relief or cure by medical, expectant, or milder surgical treatment. 3. The greater danger of the operation for their removal as compared with ovariotomy. He pointed out how often dangerous operations were undertaken for the relief of deformity, and that operations of convenience were now much more safe and justifiable, thanks to Professor Lister's method. The following proposition was advanced for discussion:—"It is justifiable to make an exploratory operation, with perfect antiseptic precautions, in any case of fibroid tumour of the uterus which has resisted medical treatment, and which is either endangering life, or preventing the subject of it from fulfilling the ordinary duties of her sex and position." The great difficulty lies in the present uncertainty of the diagnosis between the varieties of uterine fibroids. Complete records of two cases were then given—the first a complete hysterectomy, with removal of both ovaries; the second, removal of sessile fibroids and one ovary without opening the uterine cavity. Both patients recovered without fever, and without any untoward symptom. Three classes of cases were defined, each having a different amount of difficulty and risk. The author thought that the term "hysterotomy" should be given up, and that of "hysterectomy" adopted, but limited to the complete cases in which the whole of the supra-vaginal part of the uterus was removed.

Dr. BANTOCK related two cases in which he had removed fibroid tumours. In the first, a small tumour weighing two pounds was removed with a part of the uterus. The pedicle formed by the uterine body was ligatured and dropped. Death occurred from septicæmia, due to slight bleeding from the stump, with the establishment of an open canal through the cervix. In the second, an external fibroid weighing twelve pounds was removed, and the pedicle kept external. The patient did well.

Mr. DORAN said that, in the fatal case mentioned by Dr. Bantock, he had found a deep circular ulcer in the cervical canal corresponding to the ligature. He had examined also a fatal case under Mr. Thornton's care, in which the pedicle of a large fibroid outgrowth had been secured by the clamp. A slough had extended from the stump to the uterus.

The PRESIDENT believed that the operation had a great future before it, but his experience would not induce him to agree with the statement in Dr. Godson's paper that it was not more dangerous than ovariotomy. Moreover, a patient with ovarian tumour rarely lived if left to herself; a person with fibroid rarely died.

Dr. MATTHEWS DUNCAN thought it demonstrated that the operation had a place in legitimate surgery. With increased knowledge of the natural history of fibroids, he believed that the use of the operation would be extended beyond what many timid men at present imagined. Such tumours were liable to dangerous diseases and degenerations—liable to induce peritonitis, liable even to induce cancer, especially of

the peritoneum. The paramount danger arose from the bleeding which accompanied them, and produced a fatal result, he believed, more frequently than was generally supposed.

Dr. Heywood Smith criticised Mr. Thornton's use of the word "laparotomy" to designate abdominal section in the median line, since the word λαπαρον meant the flank. If a word were wanted to supersede gastrotomy, cœliotomy, from κοιλια, might do. He thought that in dealing with the pedicle a method might be devised of closing the cervical canal with sutures.

Dr. Fancourt Barnes remarked that the word λαπαρη signifies the soft part of the body between the ribs and the hips.

Dr. Graily Hewitt related a case in which a fibroid tumour, though at the time to be ovarian, caused so much ascites and peritoneal irritation as to threaten speedy death. The tumour was successfully removed.

Dr. Champneys said that the liability of fibroid tumours to tear, as happened in one of the described cases, showed that there was some risk in the legitimate proceeding of lifting impacted fibroids out of the pelvis.

Mr. Thornton, in reply, deprecated the fastening of the pedicle up to the abdominal wall as a dangerous practice. He would remind the President that many ovariotomies were incomparably more difficult than the removal of a pedunculated subperitoneal fibroid. He had now operated for uterine tumours twelve times: in ten cases the operations were completed, in two they were not. Four of the former died, and one of the latter. In three complete hysterectomies, with removal of both ovaries, he had one death; one hysterectomy with removal of one ovary, death from hæmorrhage; in three removals of fibro-cystic tumours all recovered.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

Friday, April 16.

John Syer Bristowe, M.D., F.R.C.P., President, in the Chair.

The minutes of the last meeting having been read and confirmed, the Council presented a report on the following subjects:—1. The advisability of memorialising the Government to take steps for making the appointments to the post of medical officer of health throughout the country permanent. The consideration of this was adjourned. 2. The best means by which information of the existence of cases of infectious disease in one metropolitan district can be communicated to the medical officers of health of the other metropolitan districts. The Council recommended that a circular letter be sent to the medical officers of health, pointing out the desirability of an interchange of information in respect of the prevalence of infectious diseases in adjoining districts.

Dr. J. Shea, Medical Officer of Health for Reading, and Mr. H. A. Lawton, Medical of Health for the Urban, Port, and Rural Sanitary District of Poole, will be balloted for as Extra-Metropolitan Members.

Mr. Chadwick then rose to make some remarks upon the method of taking the Census. The papers, he said, were usually sent in to the Local Government Board or the Registrar-General, and then handed to about one hundred clerks to summarise. According to this method it took three years to get out the details, which were often very inaccurate from the changes in the populations and the localities. It was calculated by the Registrar for the City of London that those possessed of the electoral franchise had changed 25 per cent. since the general election in 1874. In suburban districts the change was about 20 per cent. per annum. Tradesmen change about 10 per cent. per annum. Instead of so much centralisation he would advise that the Census be calculated out in each district locally by the superintendent registrar. The Society of Arts recommended this plan. Much time would be saved by getting out the population statistics of separate streets, so as to compare them in the matter of health. This proposal was referred to the Council.

The President remarked that in the arrangements for the proposed International Medical Congress no mention was made of the Society of Health Officers. This would give an unfair idea of the importance of sanitary science as represented in England, especially to foreigners. He had complained to the President of the College of Physicians, and it was arranged to make good this omission.

Mr. Wynter Blyth hoped that the Society would soon have a library of their own.

Dr. Corfield remarked that the library belonging to Parkes' Museum was developing rapidly, and that the Museum is open from 10 a.m. to 2 p.m. on Mondays, Tuesdays, Thursdays, and Saturdays.

On Prevention and Propagation of Diphtheria.

Mr. Wynter Blyth read this paper, of which we subjoin an abstract. After stating that diphtheria appears to belong to a group of six diseases—viz., scarlet fever, erysipelas, croup, quinsy, and puerperal fever,—and that its prevalence appeared to be irrespective of sanitary condition, the author asked, "What is the most probable cause of the outbreak of the so-called spontaneous or sporadic cases in which there has been no known contact, in which it breaks out in a haphazard way, in situations having no discoverable connexion?" Such cases, he thought, may be fairly ascribed to the wafting of the specific poison by currents of air. Bretonneau held that although the disease was caused by dust-like diphtheritic atoms impacting themselves on the mucous membrane, he yet distinctly states "that the Egyptian malady is not communicable by volatile invisible emanations susceptible of being dissolved in the air, and acting at great distances from their point of contact. It no more possesses this property than the syphilitic disease." Mr. Blyth believes that the chief carrier of the infection is the air. This opinion he had mainly adopted from two cases occurring in North Devon. A child of seven years walked in the afternoon for an hour or more with the governess in the grounds of a mansion, in the teeth of a bitter east wind. The same night both complained of malaise, and on the day following of sore throat, both presenting all the characteristic appearances of diphtheria. For many days the child was in imminent danger; the temperature was little, if at all, above the normal standard The case of the governess was similar in every respect, with the exception that it was less severe, and was followed by no sequelæ. The doctor could learn of no previous case occurring in the neighbourhood. Both of these persons were struck simultaneously, and the idea then presented itself that the air was the vehicle of the poison, and that spores of some fungus implanted on the mucous membrane of the fauces might possibly afford an explanation of the malady. The fauces were kept saturated by means of syringe and spray-producer with solutions of carbolic acid and borax in glycerine, and liq. sodæ chlorinatæ. As there was great difficulty in swallowing, the child was nourished mainly by enemata. The extreme restlessness was subdued by repeated doses of morphia, from which marked benefit was derived. The preventive measures were as follows:—The patients were isolated; the mother and three nurses were detailed to attend upon them; all the vessels, glass, plates, etc., used by the patients were disinfected in the rooms, and were not allowed to be sent to any other part of the house; all the linen was immersed in a solution of Condy's fluid in water; rags used in wiping the discharges from the nostrils and fauces were burnt. The precaution most relied upon to prevent the spread of the disease to the attendants was the keeping of their throats saturated with the same solutions. The child was taken out without sanction in an open carriage. Then followed sequelæ of the most terrible kind — albuminuria, endocarditis, paralysis of the superior laryngeal, with aphonia and complete inability to swallow, every attempt to do so being followed by violent convulsions and coughing. The author then related several cases which appeared to support the theory of aërial infection. This contagium we may suppose borne in clouds, wafted and conveyed far and wide; fortunately by far the greater part falls on soil unsuitable for development and perishes.

Diphtheria and Typhoid, and their Concomitant Conditions in Birmingham.

Dr. Alfred Hill contributed this paper. The author, in his opening remarks, said he had chosen to speak on diphtheria and typhoid in preference to any of the other zymotics, because they were not so palpably dependent on infection for the means of their spread as the others, but were doubtless due to insanitary conditions, and might, therefore, be looked upon as the most preventable of the preventable diseases. Unlike scarlatina and small-pox, which occurred epidemically and with more or less regularity, they seemed to be always

with us. Every case of diphtheria or typhoid coming under his knowledge he personally investigated, visiting and carefully examining the premises, and when doing so he found that scarlatina was frequently mistaken for diphtheria. Speaking of diphtheria, the lecturer said that it occurred nearly equally throughout the year, but was always most rife in the fourth quarter. It had no special habitat, being distributed generally over the town, with two exceptions—the centre of the town, occupied chiefly by shops, warehouses, offices, etc.; and Edgbaston, the best and most thinly populated portion of the borough. The majority of the cases occurred in the higher parts of the town, while typhoid was most prevalent at the lower levels. One-third of the houses were supplied with pump-water, nearly all of it being sewage-polluted. Roughly speaking, about one-half of the privies were on the pan system, and the other half on the midden plan, there being only a few water-closets. With regard to the drains, Dr. Hill said everyone must have noticed how drain-air and diphtheria occurred together, doubtless in the relation of cause and effect. In no less than forty-nine of the seventy-one cases of diphtheria he investigated there were palpable drain defects or animal filth. Having enumerated the defects of the bell-trap, and stated that he found animals kept in 8½ per cent. of the cases he inquired into, Dr. Hill alluded to the fact that since the introduction of the pan system into Birmingham the diphtheria death-rate had fallen from 0·31 to 0·18. A still more marked decrease had taken place in the fatality of typhoid, the rate from which had continuously declined from 0·57 in 1873 to 0·22 last year. This diminution was all the more gratifying because the decrease of fever in a community was looked upon as the best indication of the improvement of its sanitary condition, and also because it was not confined to Birmingham, but was pretty general. Dr. Hill concluded by referring to the want of care that unfortunately prevailed in diagnosing typhoid, and by citing some very forcible instances which had come under his observation of the neglect of proper drainage arrangements in the best class of houses.

In the discussion following the reading of the papers,

Dr. Tripe remarked that he had only known of one epidemic of diphtheria in Hackney, viz., in the year 1856, and that was traced distinctly to infection by sewer contamination of the houses. Seventy per cent. of the infected houses had direct connexion with the drains. In typhoid cases it was rare to find a defective drain, whereas in diphtheria it was the contrary.

Mr. Moore remarked upon the almost constant prevalence of diphtheria in Petersfield, Hants, where the drains of the houses pass by open gutters through the streets to a running stream, and bad smells are very prevalent. Diphtheria seems to extend into the towns from the adjoining suburbs.

Dr. Dudfield remarked upon the different views expressed by the authors upon this subject, possibly due to the experience of one being that of a rural, and of the latter an urban district. As regards London, we very rarely hear of two cases occurring in the same house. Typhus fever is one of the most infectious diseases, and yet in the death-certificates of Kensington there appears no record of the occurrence of two consecutive cases. He had noticed that since the death of the Princess Alice, diphtheria returns had been much more prevalent than formerly, showing that there is a certain fashion about these returns. Many scarlet fever cases are put down as diphtheria, and the Registrar-General always returns cases of cynanche maligna as diphtheria.

Dr. Woodford, of Poplar, would endorse some of the statements made by the authors. Undoubtedly in the country there is a marked prevalence of diphtheria. In the lower parts of the Thames Valley, particularly where the atmosphere is confined or shut in by trees, there diphtheria prevails.

Dr. Corfield remarked that it is now almost certainly proved that typhoid fever does not originate *de novo*. We are frequently told that every possible source of contamination has been examined, with a negative result, and yet of late it has been shown that even flies are frequently the carriers of contagion. In almost all cases of diphtheria some sanitary defects are to be found. In many cases it has been proved that diphtheria has been caused by breathing foul air, whereas typhoid fever is chiefly communicated by milk or water.

Mr. Murphy alluded to some observations of Dr. Thorne upon the existence occasionally of inflammatory sore throat which developed into diphtheria by transmission from person to person, becoming thereby increasingly virulent.

Dr. Bristowe considered that diphtheria is a disease more prevalent than is usually admitted, and, in consequence, frequently overlooked. He narrated particulars of an epidemic occurring in a house at Dulwich, where the drainage had just been rearranged; but water was derived from a pump in the garden, and this water was shown to be contaminated with sewage. Whenever a case of diphtheria is admitted to a hospital the disease rapidly spreads from one patient to another. He alluded to another family where it attacked several members, the first case having been imported by one of the sons attending a public school. No doubt it is contagious. He remembered the case of a clergyman who had had slight illness with sore throat, and yet he was attacked with paralysis in the throat, rectum, etc.

OBITUARY.

WILLIAM HEMERY CARNEGIE.

We are sorry to record the death, at Cavendish College, Cambridge, on April 16, of William Hemery Carnegie. The deceased was the grandson of Dr. Carnegie, an eminent physician practising in Dorsetshire, and was busily studying for the Natural Sciences Tripos and the other subjects necessary for the M.B. degree, but he was cut off, after a week's illness, by double pneumonia, in spite of the care and skill of Mr. Carver and Dr. Paget. The ranks of medicine have lost a promising young recruit, whose amiable character endeared him to a large circle of friends.

MEDICAL NEWS.

University of Durham.—At the first examination for the degree of Bachelor of Medicine held at the College of Medicine, Newcastle-upon-Tyne, on April 19, 20, 22, and 23, the following satisfied the examiners:—

Baker, John Hopper.
Brett, James, M.R.C.S., L.S.A.
Coley, Frederic Collins, L.R.C.P., M.R.C.S.
Hamilton, George Clarendon.
Lee, Henry Boynton.
Mears, Frederick Charles.
Mears, William Pope, M.R.C.S., L.S.A.
Robinson, Alfred.
Rowell, Robert Henry.
Sheppard, William John.
Smith, William Harvey, M.R.C.S.
Wheatley, Arthur William.

Four candidates were referred in all subjects. One candidate was referred in Botany and one in Chemistry.

University of Aberdeen.—At the April Medical Graduation Term, the following candidates, after the usual examinations, received degrees in Medicine and Surgery:—

The Degree of M.D.—James Allan, M.B., C.M., New Wandsworth, London; Algernon Dutton Brenchley, M.B., C.M., Camberwell; William Ford Edgelow, M.B., C.M., Torquay; Heber Dowling Ellis, M.B., C.M., Eastbourne; William Henry, M.B., C.M., Dunfermline; John MacMunn, M.B., C.M., Long Eaton; Adam Frederic John Mickle, M.B., C.M., Grantham; Robert Milne, M.B., C.M., Cluny; Leonard Rudd, M.B., C.M., Upper Norwood; William John Ritchie Simpson, M.B., C.M., Dover; Francis William Smith, M.B., C.M., Westbury; William Abraham Walker, M.B., C.M., Chesterfield; William Robert White, M.B., C.M., Southampton; William Herbert Williamson, M.B., C.M., Aberdeen; Julius John Eardley Wilmott, M.B., C.M., Weston-super-Mare.

The Degree of M.B.—James Aymer, Laurencekirk; William Beddie, M.A., Strichen; Harry Arthur Benham, Bristol; Alexander Boswell, London; William Hampden Brodie, Aberdeen; Algernon Aaron Cohen, Clarence River, New South Wales; William Deans, Kintore; Alexander Downie Diack, Aberdeen; John Durno, M.A., Fyvie; James Grant Fleming, Grantown; John Glaister, Wooler, Northumberland; George Henry Harvey, Colchester; Fife Jamieson, M.A., Aberdeen; Joshua Law Kerr, Crawshawbooth, Manchester; Herman John Liebstein, Highbury, London; Adam Corbet Lyon, Peterculter; Coll Reginald Macdonald, Argyleshire; Alexander Milne, M.A., Mintlaw; Satish Chandra Mukhopadhyáy, Calcutta; Alexander Augustus Wm. P. Murison, Macduff; Arthur Lodge Patch, Madras; Peter Rough, M.A., Daviot; Thomas Alexander Sellar, Lhanbryd, Morayshire; Robert Soutar, Kirriemuir; Alexander James Struthers, Aberdeen; Charles Henry Welford, Sunderland; Percy Roberts Wilde, Weston-super-Mare; Christopher St. John Wright, Priors Marston.

The Degree of C.M.—James Aymer, William Beddie, Harry Arthur Benham, William Hampden Brodie, William Deans, Alexander Downie Diack, John Durno, James Grant Fleming, John Glaister, George Henry Harvey, Fife Jamieson, Joshua Law Kerr, Herman John Liebstein, Adam Corbet Lyon, Coll Reginald Macdonald, Alexander Milne, Satish C. Mukhopadhyáy, Alexander A. W. P. Murison, Arthur Lodge Patch, Peter Rough, Thomas Alexander Sellar, Robert Soutar, Alexander James Struthers, Charles Henry Welford, Percy Roberts Wilde, Christopher St. John Wright.

Of the above-named candidates, Alexander Milne, M.A., received his degrees in Medicine and Surgery with highest Academical Honours; John Durno, M.A., Fife Jamieson, M.A., and Joshua Law Kerr received their degrees in Medicine and Surgery with Honourable Distinction.

At the same time, William Carnegie Brown and Alfred Ireland were certified as having passed all the examinations, but did not graduate; and the following were declared to have passed part of their examinations :—

William Allardes, Walter H. Atherstone, Albert Henry Barrett, Alexander T. Brand, Philip S. Brito, Harry H. Brown, Gregor Burgess, Edward Casey, John William Collie, Mackintosh A. T. Collie, Alexander Cran, Herbert W. T. Crow, Augustus W. Dalby, James McKenzie Davidson, William Davidson, David Duncan, Thomas W. Griffith, Clarence W. Haig-Brown, Gray Hassell, David Henderson, William Reid Holmes, Francis Joseph Hudson, John Jenkyns, George David Knight, George Leslie, James Leith Leslie, Ernest Craven Lunn, John N. E. Maclennan, Thomas Marsden, Frederie Maude, Charles Mayne Maxwell, James Irvine McArthur, David Reid McKinnon, James Middleton, James G. Middleton, James Millar, Grenville E. Moffet, William Moir, James Robert Nicoll, George Ogg, Henry Astley Phillips, Charles Edward Piers, David George Prothero, John Ramage, James Robertson Reid, John Reid, Henry Cooper Rose, John F. S. Royle, Aaron Sims, William Sinclair, Walter Stannes Snell, William Dyne Steel, John Taylor, John W. Trundley, Richard Rose Weir, John Alexander Williams, James Wilson.

The next Professional Examination for Degrees in Medicine commences on Saturday, July 24.

University of Dublin.—At the First Commencements in Trinity Term, held on Thursday, April 22, in the Dining Hall of Trinity College, the following Degrees in Medicine and Surgery and Licence in Medicine were conferred by the University *Caput* :—

Magister in Chirurgiâ.—Johannes Benjamin Story.
Doctor in Medicinâ.—Carolus Ricardus Whitty.
Licentiatus in Medicinâ.—Georgius Brazier-Creagh.

Royal College of Surgeons of England.—The following gentlemen, having undergone the necessary examinations for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 22nd ult., viz. :—

Barratt, Herbert J., Bedford, student of St. Bartholomew's Hospital.
Benson, Alfred, Settle, Yorks, of St. Mary's Hospital.
Bovill, Henry H., James-street, S.W., of Guy's Hospital.
Davis, William G., Philadelphia, of St. Bartholomew's Hospital.
Frampton, Tom H. T., Glo'ster-terrace, Hyde-park, of St. Mary's Hospital.
Hockridge, Thomas G., Westbourne-park, of McGill University.
Jones, William C., Llyswen, Brecons, of the Middlesex Hospital.
Parkes, Louis C., Weybridge, of University College Hospital.
Perkins, George C. S., Exeter, of Guy's Hospital.
Permewan, Arthur E., Redruth, of University College Hospital.
Reid, Norman M., Croydon, of St. George's Hospital.
Rowlands, Hugh P., Bryngwyn, Towyn, of Guy's Hospital.
Sloggett, Arthur T., Cambridge-gardens, of King's College Hospital.
Vise, Christopher, Holbeach, of University College Hospital.
Wheeler, Albert, Southsea, of the Middlesex Hospital.
Whiting, John, Beccles, of St. Bartholomew's Hospital.

Of the seventy-four candidates examined, five were approved in surgery, and when qualified in medicine will be admitted Members of the College; and twenty-six having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their professional studies for six months. The following additional qualifications were held by some of the candidates: the Licence of the Society of Apothecaries, as usual, taking the lead with twelve; the L.R.C.P. Edin., five; M.B. Edin., two; L.R.C.P. Lond., two; M.D. Würzburg, one; M.D. Pennsylv., one; M.D. McGill, one; and M.B. Toronto, one.

The following gentlemen passed their Primary Examinations in Anatomy and Physiology at a meeting of the Board of Examiners on the 26th ult., and when eligible will be admitted to the pass examination, viz. :—

Allen, F. J., B.A. Cantab., student of the Cambridge School.
Atkinson. George A., of the Edinburgh School.
Benjafield, William B., of the Edinburgh School.
Bradley, William E., of the Manchester School.
Cornish, C. Newton, of King's College Hospital.
Dunlop. James D., of the Edinburgh School.
Evers, Charles H., of the Newcastle School.
Houseman, James G., of the Edinburgh School.
Jones, H. L., B.A. Cantab., of St. Bartholomew's Hospital.
Martin, William A., of the Liverpool School.
Mills, B. Langley, of the Edinburgh School.
Myles, George T., of the Bristol School.
Robertson, John R. S., of the Edinburgh School.
Saunders, Frederick A., of the Liverpool School.
Ward, Anthony A., of the Leeds School.
Wilcock, William H., of the Leeds School.
Williams, Thomas H., of the Glasgow School.
Young, Charles S., of the Glasgow School.

Six candidates were rejected. The following gentlemen passed on the 27th ult., viz. :—

Arthy, George F. S., student of the Leeds School.
Ashdown, Herbert H., of the Edinburgh School.
Banham, William W., of the Sheffield School.
Beardmore, George R., of the Sheffield School.
Blair, Charles S., of the Newcastle School.
Edlin, Herbert E, of the Manchester School.
Gibson, John L., of the Edinburgh School.
Macken, Samuel, of the Edinburgh School.
Maddox, Ernest E., of the Edinburgh School.
Naylor, John H., of the Leeds School.
Riordan, Daniel, of the Galway School.
Rodley, John, of the Manchester School.
Waddington, William J., of the Leeds School.
Walker, Edward B. C., of the Edinburgh School.
Winder, William H., of the Manchester School.

Nine candidates were rejected. The following gentlemen passed on the 28th ult., viz. :—

Bullar, John F., student of St. Bartholomew's Hospital.
De Winton, Alfred, of Guy's Hospital.
Frampton, Frederick T., of St. Mary's Hospital.
Grose, Ernest F., of University College Hospital.
Heald, Hugh, of the Liverpool School.
Hoole, John, of St. Bartholomew's Hospital.
Jalland, Robert W., of St. Bartholomew's Hospital.
Lee, George T., of University College Hospital.
Orford, John, of St. Thomas's Hospital.
Scanlan, A. de Courcy, of the Westminster Hospital.
Spitzly, John H., of St. Mary's Hospital.
Sykes, Matthew C., of St. Bartholomew's Hospital.
Taylor, Thomas, of the Middlesex Hospital.

Eleven candidates were rejected.

The following were the questions on Anatomy submitted to the candidates at the written portion of the primary examination on the 23rd ult., when they were required to answer four (and not more than four) of the six questions, viz. :—1. Describe the first rib, naming the structures in immediate relation with it. 2. Describe the ligaments connecting the skull with the spinal column. 3. Describe the coverings and coats of the testicle. 4. Give the dissection necessary to expose the posterior tibial artery; describe its course and relations, and name its branches and their anastomoses. 5. Describe the pelvic fascia in the male, its attachments, arrangement, and relations. 6. Describe the course, relations, and distribution of the musculo-spiral nerve. The following were the questions on Physiology (with the same conditions as those in Anatomy), viz. :—1. Describe an act of deglutition, mentioning, in the order of their action, the muscles engaged, and their nervous supply. 2. Describe the structure of a lobule of the lung. State the changes which the air and blood respectively undergo in respiration. 3. Describe the conditions requisite for the performance of a simple reflex act. Give examples of reflex acts occurring without sensation, and of others associated with sensation; in each case specifying the several parts concerned. 4. Give the physical characters of urine. What are its normal constituents? State the circumstances which cause variations in them within the limits of health. 5. Describe the structure of a Graafian follicle, and give the changes that take place in it after the discharge of an ovum. 6. How may the function of a nerve be determined? What are the functions of the first four cerebral nerves?

Royal College of Surgeons in Ireland.—At a meeting of the Court of Examiners held on April 19 and 20, the undernamed gentlemen were admitted to the Fellowship of the College, viz. :—

Banks, Dr. Samuel Henry, Surgeon-Major H.M. Bombay Army.
Potter, Dr. Henry, Surgeon-Major H.M. Bengal Army.

Apothecaries' Hall, London.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, April 22 :—

Breach, James Henry, Yattenden, Newbury, Berks.
Gibbs, Alfred Napier Godby, Clifton, Bristol.
Morris, Edgar Freeman, St. Owen's-street, Hereford.
Pitman, William Weston, Acacia House, Highgate.
Spackman, Henry Robert, Pennfields, Wolverhampton.
Thomson, Thomas, Approach-road, Victoria-park.

The following gentlemen also on the same day passed their Primary Professional Examination :—

Cole, George Milner, of St. Bartholomew's Hospital.
Sumner, Joseph Henry Surtees, of the London Hospital.

At the Preliminary Examination in Arts, held at the Hall, on Friday and Saturday, April 23 and 24, 137 candidates presented themselves, of whom the following passed and received certificates of proficiency in General Education. In the First Class, in order of merit, viz. :—

1. T. H. Fisher; 2. Mary Emily Dowson; 3. W. Lansdale; 4. E. H. O. Little and Arthur William Jones; 6. Edward Felix, H. J. Hawthorn, and J. Martyn.

In the Second Class, in alphabetical order, viz. :—

F. W. Abbott, B. Badcock, J. S. Batchelor, G. H. Bate, G. P. Bott, N. J. N. Bray, Samuel J. Brooks, F. St. John Bullen, C. Burland, H. L. Cade, J. W. Cafferata, J. S. Caskey, H. W. Chambers, J. C. Christie, W. A.

Clarke, John Crisp, F. Evered, E. C. Featherstone, W. I. Fern, Octavius S. Fisher, H. Fox, C. B. Francis, R. Freeman, G. F. C. Gardiner, J. Girvin, T. W. Gibbard, C. B. Gilson, W. H. Godfrey, W. H. Hall. F. W. Hamp, C. J. Heath, T. S. Heaton, A. B. Holberton, W. J. Hosford, W. W. Howard, H. L. Hudson, W. A. Jacobson, T. G. Lavie, J. L. Lewis, G. C. Macdonald, A. A. Macfarlane, J. G. Mackay, F. W. Metcalfe, Anne Emily Mills, W. A. Mushet, F. Nuttall, R. Pinhorn, R. H. F. Routh, Agnes Russell, D. S. Saunders, F. A. Saw, Albert W. Smith, Cecil Smith, J. Baker Smith, Robert E. Smith, Sophia Emilia Smith, C. F. White, J. R. Williams, W. R. Wolfe, Edwin P. Wright, Sydney C. E. Wright, and R. B. Wyeth.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to all new Appointments that take place.

Churton, T., M.D.—Honorary Physician to the Leeds General Infirmary.

Clarke, J. St. Thos., M.B. Lond., F.R.C.S.—Honorary Surgeon to the Leicester General Infirmary.

De Wolfe, G. H. H., M.D.—Honorary Physician to the Sheffield Public Hospital for Diseases of the Skin.

Hardwicke, H. J., M.D., M.R.C.P.E.—Honorary Physician to the Sheffield Public Hospital for Diseases of the Skin.

Hazard, J., M.R.C.S.—Honorary Surgeon to the Sheffield Public Hospital for Diseases of the Skin.

BIRTHS.

Chessall.—On April 22, at Horley, Surrey, the wife of Wm. Chessall, M.D., of a son.

Darke.—On April 27, at Salisbury, the wife of F. R. P. Darke, M.R.C.S., of a son.

Edwards.—On March 19, at St. John's, Antigua, West Indies, the wife of Arthur E. Edwards, M.R.C.S., of a son.

Gordon.—On April 20, at 10, Amersham-road, New Cross, S.E., the wife of John Gordon, M.D., of a daughter.

Harding.—On April 20, at North Lawn, Westgate-on-Sea, Kent, the wife of G. Clarence Harding, M.R.C.S., L.R.C.P., L.M., of a daughter.

Lancaster.—On April 22, at 247, Lewisham High-road, S.E., the wife of H. F. Lancaster, M.D., of a son.

Walker.—On April 22, at 58, Ladbroke-grove-road, the wife of A. Dunbar Walker, M.D., of a daughter.

MARRIAGES.

Duigan—Lowe.—On April 26, at St. Patrick's, London, Daniel John Duigan, M.D., Deputy Inspector-General of Fleets and Hospitals, to Mary, daughter of George Hamilton Lowe, Esq., of Kilkenny.

Hargreaves—Eames.—On April 15, at Cork, Charles Hargreaves, Esq., of The Heights, Bolton-le-Moors, Lancashire, to Florence Nightingale, eldest daughter of James Alexander Eames, M.D., of Eglinton Asylum, Cork.

Landale—Webster.—On April 22, at Elgin, N.B., Andrew Landale, Esq., late of Shikarpore, Bengal, to Helen, eldest daughter of James Webster, M.D.

Messiter—Houghton.—On April 21, at Dudley, M. Arden Messiter, M.R.C.S., of Dudley, to Isabella Sarah, only daughter of the late John Hyde Houghton, F.R.C.S., J.P.

Murray-Dunlop—Jennings.—On April 20, at Halifax, Nova Scotia, H. L. Murray-Dunlop, Lieut. Royal Artillery, to Mary Hutchison, youngest daughter of Edward Jennings, M.D., of Halifax.

Renshaw—Walkden.—On April 24, at Savoy, Bernard Renshaw, Staff-Surgeon R.N., to Elizabeth, youngest daughter of the late Samuel Walkden, Esq., of Oldcastle House, Blackheath.

Shubrick—Wilson.—On March 20, at Bangalore, Richard Ladbroke Shubrick, Esq., of Greenway, Ootacamund, to Harriet Frances, eldest daughter of Deputy Surgeon-General John Wilson, Indian Medical Department.

DEATHS.

Barrington, William Boxwell, LL.D., late Surgeon in H.M. Indian Army, at Bexley Heath, on April 24, in his 79th year.

Brown, Helen Agnes Daisy, only daughter of Wm. Brown, M.B., of Dunedin, New Zealand, at 64, Lyndhurst-road, Peckham, on April 24, aged 6.

Druitt, Jane, only daughter of the late Robert Druitt, surgeon, of Wimborne Minster, Dorset, on April 26, whilst on a visit to her brother, at Christchurch, Hants, aged 58.

Fergusson, William Edward Laing, M.D., at 43, Claremont-square, N., on April 25.

Heath, Edward, M.D., R.N., at Dovercourt, Essex, on April 22.

Kidgell, Stephen Wilson, M.R.C.S. Eng., L.S.A., of Pangbourne, Berks, at Bath, on April 24, aged 70.

Moylan, W. J., Surgeon A.M.D., on board H.M.S. *Euphrates, en route* to India, on March 20, in his 32nd year.

Nursey, Catherine Head, wife of Poussin H. Nursey, Esq., at Guernsey, on April 22, aged 71. Also, Poussin H. Nursey, Esq., son of the late Perry Nursey, M.R.C.S., of The Grove, Little Bealings, Suffolk, on April 23, aged 78.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

Clinical Hospital for Women and Children, Park-place, Cheetham-hill-road, Manchester.—House-Surgeon. Applications, with testimonials, to be sent, on or before May 3, to Mr. Marshall, Secretary, Barton-arcade, Manchester.

Cumberland Infirmary, Carlisle.—House-Surgeon. Applications, with testimonials, to be sent to the Secretary, Joseph Lowthian, Esq., on or before May 11.

Deaconesses' Institution and Training Hospital, Tottenham.—House-Surgeon. Candidates preferred who have filled a similar post before. Applications, with testimonials, to be sent to M. Laseron, M.D., The Green, Tottenham, on or before May 7.

Greenwich Union Infirmary.—Assistant Medical Officer. Candidates must be registered and hold a diploma in medicine and be unmarried. Further particulars as to duties, etc., may be obtained from the Medical Officer, Dr. Burney, at the Infirmary, East Greenwich. Applications and testimonials to be sent to Mr. Samuel Saw, Clerk to the Guardians, on or before May 6, on which day candidates are to attend the Board meeting personally at 2 p.m.

Hospital for Consumption and Diseases of the Chest, Brompton.—Assistant-Physician. Candidates must be Doctors or Bachelors of Medicine, and Fellows or Members of the College of Physicians. Applications and testimonials to be sent to the Honorary Secretary before May 5. (*For further particulars see Advertisement.*)

Hospital for Sick Children, Bristol. House-Surgeon.—(*For further particulars see Advertisement.*)

Liverpool Infirmary for Children, Myrtle-street.—Assistant House-Surgeon. Candidates must be duly qualified. The appointment will be for six months. Applications to be sent to the Committee of the institution.

Notting-hill Provident Dispensary.—House-Surgeon. Applications, with testimonials, to be sent to the Hon. Secretary, W. P. Collins, Esq., 8, Pembridge-gardens, Notting-hill, W., on or before May 25.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Spilsby Union.—Dr. J. J. Weakley has resigned the Stickney District: area 13,602; salary £46 per annum.

Sunderland Union.—The Bishopwearmouth East District is vacant by the resignation of Mr. H. H. Taylor: population 37,264; salary £75 per annum.

Wallingford Union.—The Dorchester District has become vacant by the death of Mr. Arthur Anthony Harris: area 13,314; population 4840; salary £100 per annum.

APPOINTMENTS.

Alnwick Union.—Edwin Pringle Thew, M.B. and M.C., to the Lesbury District.

Boston Union.—Charles Edward Bentley, L.R.C.S. and L.R.C.P. Edin., to the Kirton District.

Darlington Union.—William Chisholm, M.D., L.R.C.S. and L.M. Edin., to the Hurworth District.

Holywell Union.—Henry Slyman Michell, M.R.C.S. Eng., and L.S.A. Lond., to the Whitford District, Second Division.

Honiton Union.—James Campbell Macaulay, M.R.C.S. Eng. and L.S.A. Lond., to the Ninth District.

Portsea Island Union.—Josiah George Blackman, M.R.C.S. Eng., and L.S.A. Lond., to the Portsea District.

St. Austell Union.—William Mason, M.R.C.S. and L.M. Edin., L.R.C.P. and L.M. Edin., to the Second and Seventh Districts.

Shardlow Union.—William Henry Wright, L.R.C.P. Ire., L.M., M.R.C.S. Eng., and L.S.A. Lond., to the Normanton District.

Thrapston Union.—Edward Joseph Latham Blacker, M.D. Trin. Coll. Dub., M.R.C.S. Ire., and L.M., to the "B" District.

York Union.—Henry Ebenezer Spencer, L.R.C.P., L.R.C.S., and L.M. Edin., to the Second District.

Listerism at Lyons.—Dr. Létiévant, senior surgeon of the Hôtel-Dieu of Lyons, publishes in the *Lyon Médical* for April 18 an account of the results of his employment of the Lister method. After a trial of it in 1869, made only in an imperfect manner, he put it into force regularly in 1875, and has continued it ever since, either exactly in the manner directed by its inventor, or as what he terms the "modified Listerian dressing." The pure Listerian method, used exactly as, and with the same material, employed by Lister himself, is now employed for the most severe cases, the modified form being reserved for the less important. The result has been most satisfactory. Purulent infection and hospital gangrene have disappeared, erysipelas is of rare occurrence, and union by primary intention is the rule. The number of amputations has largely diminished, and the surgical mortality has declined from one in twelve or one in sixteen, to one in nineteen or one in twenty, and that in spite of operations being now undertaken which a few years ago would not have been ventured on. What Dr. Létiévant means by his "modified" form is an attempt at simplifying the dressing, which he says has proved very successful. All the preparations for the dressing are conducted with the precautions insisted upon by Lister, and a thin, supple, impermeable piece of waxed silk, which has been taken from a slightly carbolised solution, is then laid on the wounded surface, extending four or five centimetres beyond the margins of this. Immediately over this is placed a layer of purified cotton taken from a carbolised solution of fifty per thousand. This is gently heaped up, and then covered by a layer of waxed silk, which extends far beyond the rest of the dressing, and is intended to keep the carbolised vapour,

constantly disengaged from the imbibed cotton, in contact with the integument surrounding the wound. Linen compresses imbibed with carbolised solution cover the edges of the dressing and its surface closely, and one or more turns of a bandage wet with the solution maintain it *in situ*. Finally, a thick layer of carded cotton covers the whole, and allows of a gentle and equal compression being made by a bandage. Every twenty-four, or at most every forty-eight, hours the carbolised compresses must be renewed. If all these details are rigorously carried out, this modified form is advantageous from the rapidity of its application, the pleasantness due to its moist condition, its admitting of regular compression being made, the materials being easily accessible, and their price comparatively moderate.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Devoniensis.—Has "Devoniensis" been reading the *Medical Times and Gazette*? Already we have devoted some time and trouble to the discussion of the question, and, as it so happens, must again engage in it.

Milk-vending: a New Point.—A point under the Adulteration Act was raised last week at the sitting of the county magistrates at Hove, by an itinerant vendor of milk, charged with selling an adulterated article. The evidence showed that it contained 40 per cent. of added water, but for the defence it was urged that the inspector was told it was a mixture at the time of sale. The prosecution, however, relied upon the fact that there was no label to that effect upon the vessel from which the milk was taken, and that a verbal intimation was not a sufficient compliance with the Act, as it would leave it open to the vendor to declare the quality of his goods according to his own option. The Bench imposed a fine of 10s. and costs. Notice of appeal was given.

In Memoriam.—Captain Taylor, of Tynllyn, a Welsh squire, has erected, in the form of a memorial to a deceased son, a reservoir to supply the village of Cynwyd with water.

A Coroner and his Jury.—A novel feature at the assizes at Winchester, last week, was the appearance in the box of a coroner's jury from the borough of Portsmouth, who were bound over by Mr. Browsdon, the coroner, to attend and have the advice and direction of the judge in a case of death from a collision between a steamboat and a steam launch, when the jury were unable to agree. Mr. Justice Hawkins now defined what constituted culpable or criminal neglect. After a prolonged consultation the jury returned a verdict of negligence against the master of the steamboat by which the death was caused, but expressed no opinion of its criminality.

Marine Births and Deaths.—The Registration Act and the Passengers Act require that captains or commanding officers of British vessels should transmit to the Registrar-General the particulars of all births and deaths that occur at sea amongst English subjects.

A Water-Rate Payer, Marylebone.—It is stated that the metropolitan water companies have been officially informed that, in consequence of the change in the administration, the pending negotiations between them and the Government must be at an end.

A Model Student.—A young American, who had been in Paris for a year studying medicine, was visited by his father. He paraded his father through the city, and pointed out its architectural lions. Finally, they halted before a many-pillared building—"What is that lordly pile?" asked the old man. "I don't know," replied the youth, "but there is a sergeant-de-ville." They crossed over and put the question. "That, gentlemen," said the official, "is the medical school."

Noteworthy.—By the Registrar-General's return for the year 1879, the usual preponderance in the British Isles of women over the men seems likely to undergo some change. In the return for the past year the number of boys born was 442,289, while the girls only numbered 433,577. Moreover, the number of females who died exceeded the males by some 30,000.

Rag and Bone Shops.—Dr. Ballard, in his report to the Local Government Board on effluvium nuisances, just published, directs special attention to these places of business. He says, "the nuisances arising from the shops of what are called 'marine store dealers' in London are notorious, and unfortunately very familiar to medical officers." Dr. Ballard quotes the opinion of the late Dr. Aldis, formerly Medical Officer of Health in Belgravia, that "among the odours of London those emitted in rag-shops or the houses of marine store dealers are about the most dangerous." Rags are usually sorted on the premises, and occasionally "kitchen stuff" is melted in the back yard. These rags are often infected materials, and these establishments consequently, by such accumulations, become centres of infection. The law is unsatisfactory and inadequate to stop the disposal of infected articles to dealers in rags and old clothing, and rarely, therefore, is it that an offender is detected and punished.

Veritas.—The consultant should in such circumstances be very careful to know that the bond between the patient and the usual family medical attendant has been distinctly broken, and all obligations acknowledged and discharged; and even then the consultant would only with great reluctance consent to take charge of the case. It must, however, be remembered, on the other hand, that patients have a right to change even their medical attendants if they choose.

A Rejected Candidate.—Unfortunately it was your own fault, as you were distinctly informed by the presiding examiner, and moreover had the regulation before you, that "candidates unable to answer four questions" were to report the fact to the gentleman in the chair, and were not to proceed with their examination.

Nurse.—Apply to the Lady Superior, St. John's House, Norfolk-street, Strand; or to the Head of the Nightingale Nursing Establishment, St. Thomas's Hospital.

Six-Day Liquor Licences in England and Ireland.—From recently issued official returns for the financial year 1878-79, it appears that in Ireland, with a population less than five millions and a half, no fewer than 6048 the licences for the sale of intoxicating liquors for consumption on the premises were six-day licences. In England, with a population nearly five times that of the sister isle, 6866 of the licences were six-day. The total number of six-day and early closing licences together was only 8038 in England, but it was 8692 in Ireland. These numbers clearly demonstrate the strength of public opinion in Ireland for the restriction of the hours of business in taverns and liquor-shops where drink is consumed on the premises.

L. L. P., Derbyshire.—Between the years 1705 and 1845 the degree of doctor of medicine was conferred by the University of Edinburgh on no less than 5096 persons.

Doubtful Centenarians.—Mr. W. J. Thoms, the well-known author "On the Longevity of Man," remarks:—"In strange contrast with the feeling of indignation so often manifested when doubt is thrown upon any cases of supposed abnormal longevity is the confidence and recklessness with which the most startling announcements of such cases are given to the world without the least preliminary inquiry, and often without a particle of foundation." In his last work, Mr. Thoms gives the facts of the only three cases of survival beyond the century which he has been able satisfactorily to prove, but two or three other cases are mentioned as doubtful.

The Smoke Nuisance at Brighton.—In consequence of complaints of the nuisance of smoke from the furnaces and flues of works in various parts of Brighton, the Sanitary Committee of the Town Council has instructed the medical officer of health to take proceedings under the Public Health Act to compel the abatement of the nuisance within one month.

Deaths by Drowning.—The necessity for encouraging the learning of the art of swimming by official authorities and heads of public and private schools, is shown by the fearful number of fatalities from drowning in the following official return just issued:—During the year 1878, inquests were held in England and Wales on the bodies of 2389 males and 814 females whose deaths were caused by drowning in inland waters, in Scotland on 399 males and 83 females, and in Ireland on 285 males and 84 females.

W. Trevor V.—The first Professor of Medicine in the University of Virginia was Dr. Robley Dunglison, of England. This school, when designed, was rather to afford the opportunity of cultivation in medical science to the general student than to give a preparation for the practice of the profession. Dr. R. Dunglison resigned after eight years. He died in 1869.

Hygienist.—The history of health and disease, *vide* the Registrar-General's annual reports, has now been recorded in England for forty-two years. It is true, no doubt, that much of our knowledge of the laws of sickness and of health has been dearly-bought experience; but one advantage, at least, has accrued—that no great outbreak of disease has passed away without causing a new impulse to sanitary measures.

BOOKS, ETC., RECEIVED—

Des Paralysies, par le Dr. Louis Landouzy—Recherches Cliniques et Expérimentales sur le Bruit de Moulin, par le Dr. P. Regnier—Accidents de la Lithiase Biliare, par le Dr. A. Mossé—Des Gangrènes Spontanées, par le Dr. Edouard Rondot—Des Sueurs Morbides, par L. Bouveret—The Care of the Insane and their Legal Control, by John Charles Bucknill, M.D., F.R.S.—General Statistical Report of the Highgate Infirmary, by Charles M'Cann, M.R.C.S., L.S.A.—Dextral Valvular Disease of the Heart, by Alexander Morison, M.D. Edin.—Surgery in the Pennsylvania Hospital, by Thomas G. Morton, M.D., and William Hunt, M.D.—On Diseases of the Skin, by Ferdinand Hebra, M.D., and Moriz Kaposi, M.D., vol. v.—Lexicon of Medicine and the Allied Sciences, by Henry Power, M.B., and Leonard W. Sedgwick, M.D., part 3-Monthly Report on the Health and Meteorology of the Parish of Saint Marylebone for March, 1880, by John Whitmore, M.D.—Atlas of Illustrations of Pathology, by Dr. Greenfield and Dr. Goodhart—Method for Performing Post-mortem Examinations—Annals of the Anatomical and Surgical Society, Brooklyn, N.Y., by Charles Jewett, M.D.—The Problems of Insanity, by George M. Beard, A.M., M.D.—Ethylization, by R. J. Levis, M.D.—Science Lectures for the People—Annual Report of the Committee of the Manchester and Salford Sanitary Association for 1879—The Religion of the Future, by John Beattie Crozier, M.B.—Neurological Contributions, by William A. Hammond, M.D., and William J. Morton, M.D.—Bristol Royal Infirmary Reports, vol. i. 1878-79—Transactions of the Odontological Society of Great Britain, vol. xii., No. 6.

COMMUNICATIONS have been received from—

Mr. John Bellamy, Local Government Board; The Secretary of the Medical Faculty, University of Aberdeen; Messrs. Max Greger and Co., London; The Secretary of the South London School of Pharmacy; Dr. E. I Sparks, Mentone; Mr. Knowsley Thornton, London; The Secretary of the Pathological Society; Mr. J. Chatto, London; Mr. Wm. J. Smith, Rotherham; Mr. G. R Sheraton, Seafield; Mr. T. M. Stone, London; Mr D. Colquhoun, London; The Secretary of the Sheffield Public Hospital for Diseases of the Skin; The Registrar-General of Edinburgh; The Secretary of the Pharmaceutical Society of Great Britain; Dr. A. Sangster, London; Dr. J. W. Moore, Dublin; Mr. Shirley F. Murphy, London; Dr. Godson, London; The Secretary of Apothecaries' Hall, London; The Secretary of the Odontological Society of Great Britain; The Secretary of the Association of Surgeons practising Dental Surgery; The Registrar of the College of Medicine, Newcastle-on-Tyne.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Centralblatt für die Medicinischen Wissenschaften—Nature—Revue Médicale—Occasional Notes—Gazette Hebdomadaire—Louisville Medical News—Brain—Boston University Year-Book—St. Louis Courier of Medicine, etc.—Philadelphia Medical Times—Centralblatt für Gynäkologie—Index Medicus—Students' Journal and Hospital Gazette—Mexborough and Swinton Times—El Jurado Medico Farmaceutico—Washington National Board of Health Bulletin—Torquay Times, April 24—National Anti-Compulsory Vaccination Reporter—Boy's Own Paper—Sunday at Home—Leisure Hour—Girl's Own Paper—Boston Medical and Surgical Journal—Calcutta Medical News—Indian Medical Gazette—Northampton Mercury Daily Reporter.

APPOINTMENTS FOR THE WEEK.

May 1. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

Royal Institution, 2 p.m. Annual Meeting.

3. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Odontological Society, 8 p.m. Mr. Arthur Underwood, "On Nerve-Stretching in Neuralgia." Casual Communications from Mr. G. H. Harding, Mr. E. M. Todd, and Mr. Moon.

Medical Society of London, 8½ p.m. The Annual Oration will be delivered by Dr. W. H. Broadbent, "On the Pulse and Some of its Indications."

4. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Pathological Society, 8½ p.m. The President—Mr. Harrison Cripps—1. Imperforate Anus; 2. Volvulus in an Infant; 3. Complete Necrosis of Lower Jaw with Cancrum Oris. Mr. R. W. Parker—1. Diffuse Sarcoma of Liver in an Infant aged three weeks; 2. Ossifying Chondro-Sarcoma of the Left Femur, with Secondary Growths; 3. Congenital Talipes Varus and Talipes Calcaneus. Mr. W. Adams—1. Tendo-Achillis Divided in a Case of Pseudo-Hypertrophic Muscular Paralysis; 2. Sequel of a Case of Syphilitic Gummata. Mr. Eve—Kidneys showing the Cystic Degeneration of Adults. Dr. Samuel West—1. Two Specimens of Complete Excavation of One Lung; 2. Acute Fatty Atrophy of the Liver. Dr. H. Orlebar—Aneurism of Aortic Arch Rupturing into Trachea. Dr. Barlow—Congenital Syphilitic Ulceration of the Tongue."

5. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Lister), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.; National Orthopædic, Great Portland-street, 10 a.m.

Epidemiological Society (University College), (Council Meeting, 7 p.m.), 8 p.m. Surgeon-General Dr. John Murray, "On Removal in Epidemic Cholera." Dr. Lawrence Hamilton, "On the Report of the German Medical Commission on the Outbreak of Plague in the Province of Astrakan in 1879."

Obstetrical Society, 8 p.m. Specimen:—Dr. Godson—Encephalocele. Papers:—Dr. Braxton Hicks—1. "On Recording the Fœtal Movements by means of a Gastrograph." 2. "On a Case of Extra-Uterine Fœtation; Sudden Urgent Symptoms; Abdominal Section." Dr. Charles H. Carter, "On Two Cases of Extra-Uterine Fœtation, with Results."

6. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

Harveian Society, 8½ p.m. Mr. Reeves, "On Rectal Stricture, with special reference to Rectotomy and Twenty-five Colotomies." Mr. Cripps Lawrence, "On Rickets."

7. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, April 24, 1880.

BIRTHS.

Births of Boys, 1334; Girls, 1282; Total, 2316.
Corrected average in the 10 years 1870-79, 2541·3.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	730	687	1417
Average of the ten years 1870-79, corrected to increased population	869·2	808·3	1677·5
Deaths of people aged 80 and upwards ...	...	...	50

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa
West	561359	...	6	6	4	23	...	1	...	3
North ...	751729	10	5	10	2	19	...	3	1	3
Central ...	334369	...	2	3	2	4	...	2	...	...
East	639111	1	4	9	1	11	...	1	3	...
South	967692	4	13	18	1	26	1	3	...	2
Total	3254260	15	30	46	10	83	1	10	4	8

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·797 in.
Mean temperature	51·9°
Highest point of thermometer	66·9°
Lowest point of thermometer	38·1°
Mean dew-point temperature	43·6°
General direction of wind	S.W.
Whole amount of rain in the week	0·30 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, April 24, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1880.*	Persons to an Acre. (1880.)	Births Registered during the week ending April 24.	Deaths Registered during the week ending April 24.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Centimetres.
London	3664149	48·6	2616	1417	66·9	38·1	51·9	11·06	0·30	0·76
Brighton	107321	45·6	56	39	61·2	40·6	49·9	9·94	0·35	0·89
Portsmouth ...	134224	29·9	93	35	...	...	...	...	...	...
Norwich	85827	11·5	71	41	67·0	40·0	52·2	11·22	0·06	0·15
Plymouth	74993	53·8	44	46	66·8	36·6	49·2	9·55	0·35	0·89
Bristol	213536	48·0	149	8	58·2	37·6	48·4	9·11	0·59	1·50
Wolverhampton ...	75970	22·4	50	31	59·3	35·8	47·4	8·55	0·06	0·15
Birmingham ...	394738	47·0	323	158	...	...	...	...	...	...
Leicester	129912	40·6	113	34	65·2	37·0	50·0	10·00	0·24	0·61
Nottingham ...	173827	17·4	139	96	65·7	34·0	51·0	10·56	0·07	0·18
Liverpool	544056	104·4	419	247	62·0	42·0	48·9	9·39	0·21	0·53
Manchester ...	363130	84·6	274	164	...	...	...	...	...	...
Salford	185786	35·9	163	98	...	...	...	...	...	...
Oldham	115413	24·7	62	50	...	...	...	...	...	...
Bradford	197196	27·3	142	82	60·3	39·3	48·8	9·34	0·08	0·20
Leeds	318929	14·8	249	120	61·0	39·0	48·5	9·17	0·00	0·00
Sheffield	304938	15·5	230	145	64·0	37·0	50·0	10·00	0·05	0·13
Hull	149627	41·2	101	65	63·0	37·0	49·7	9·83	0·30	0·76
Sunderland ...	116730	42·2	94	56	65 0	43·0	51·6	10·90	0·06	0·15
Newcastle-on-Tyne	149366	27·8	119	58	...	...	...	...	...	...
Edinburgh	229839	54·8	142	104	60·1	37·2	49·1	9·50	1·78	4·52
Glasgow	589598	97·7	393	287	56·8	42·0	49·1	9·50	1·47	3·73
Dublin	314666	31·3	220	216	59·8	39·5	49·7	9·83	0·42	1·07
Total of 23 Towns in United Kingdom	8633571	39·2	6235	3669	67·0	34·0	49·7	9·83	0·28	0·97

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·80 in. The lowest reading was 29·66 in. on Thursday afternoon, and the highest 29·94 in. on Friday evening.

* The figures for the English and Scottish towns (except for Nottingham, Salford, and Oldham) are the numbers enumerated in April, 1871, raised to the middle of 1880 by the addition of nine years and a quarter's increase, calculated at the rate which prevailed between 1861 and 1871. Revised estimates have been adopted for Nottingham, Salford, and Oldham, based upon special returns of inhabited houses existing within those boroughs. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE ON A CASE OF OTITIS WITH ABSCESS OF THE CEREBELLUM AND PYÆMIA.

By HENRY THOMPSON, M.D., F.R.C.P.,
Consulting Physician to the Middlesex Hospital.

ANNIE C., aged twelve, was admitted under my care on October 12, 1878, with the following history, as recorded in the notes:—Her father died of phthisis, and one sister of marasmus. She herself has suffered from pains in the head for many years. For the last six months she has been growing thinner, and for six years she has had a foul-smelling discharge from the right ear. On October 7 she complained of the head; on the 9th the heart beat violently, and throughout the forthcoming week she felt drowsy and vomited much, independently of the food she had taken.

On admission, she is described as a fairly nourished, dark-haired, red-lipped girl; cheeks flushed; tongue furred; pupils large, equal in diameter, and equally responsive to light; eyes encircled by a deep-brown areola; pulse small and compressible. Vomits incessantly, and complains of almost incessant headache, chiefly over the forehead. No strabismus; no retraction of the abdomen. Temperature 100°; pulse 112; respirations 28.

The case is far too long for detailed description. I can only give a sketch of the sequel in a general way, with one or two allusions to particular dates. Summarily, then, the main points were these:—Recurrent rigors, thirteen in number from admission to death, a period of eighteen days. Continued vomiting—often a simple regurgitation of clear inodorous fluid, neutral to test-paper, while the vomited matters at other times were most offensive in odour. Foul exhalations from the breath and from the whole body. Pain, seated first in the frontal region, then attacking the occiput, ultimately restricted to the right side of the neck, and there accompanied by much swelling and tenderness of the parts around. Spectral illusions and visions of strange forms flitting about the foot of the bed; hyperæsthesia of the surface; dizziness; difficulty of swallowing, and involuntary passage of urine and fæces. Harassing cough and severe pain on both sides of the thorax and across the abdomen. Impaired resonance over more than the lower half of the right back—noted on October 25; dulness over both posterior bases, with fine crepitus on the left side—noted on the 26th of the month. In the last stage, unconsciousness or semi-consciousness, diarrhœa with fœtid evacuations, sordes on the gums, insensibility of the pupils, lividity of the lips, and, on October 30, death amid convulsions.

The important phenomena of the pulse, the respirations, and the temperature, I have held in reserve apart from the rest, in order to dwell upon them a little more at length. The pulse was variable; never below 100, often inordinately rapid, especially towards the close; the highest rate on record amounted to 163. The respirations also were variable. Always above the average standard even from the beginning, in the end, during the last week, they rose to an enormous number, culminating in 76. Often they were paroxysmal, but the paroxysms never bore the periodical characters of the Cheyne-Stokes type, the ascending and descending form, that which is bounded by absolute apnœa at each extremity of the cycle. The temperature, high at first, but not immoderately so, on the 17th began to look ominous. On the 19th it was taken every two hours. The maximum for that day was 105·2°, and the minimum 99·4°, giving a range of 5·8°. For the succeeding days the four highest maxima were 105·8°, 106°, 106·4°, and 106·8°—the last-mentioned occurring twice. The four lowest minima were 97·6°, 97·4°, 97°, and 96·2°. The four oscillations of the greatest amplitude—the four longest ranges—were 6·8°, 7·2° 8°, and 8·4°.

For treatment, iodide and bromide of potassium along with occasional opiates were tried in the first instance, but soon superseded by opium in repeated doses—five minims of the liquor opii every three hours, or forty minims in the course of the day. The compound ether and compound cetaceum draughts followed in association with the linctus morphiæ, which henceforth did duty for the opium, inasmuch as the pain was now on the decline. At the last, hydrocyanic acid and bismuth were given to control vomiting. Throughout the case most of the ordinary local remedies were in constant use, but leeches were only once applied.

Autopsy from the Report of Dr. Sidney Coupland.—The longitudinal sinus contained a small quantity of non-adherent blood-clot. The pia mater on the convexity was smooth and transparent, but its vessels were very full of blood. The outer and upper part of the cerebellum on the right side was found adherent to the dura mater, which at the spot presented a dirty slate-blue appearance. The cerebellum itself was similarly discoloured in the same region, and, on detaching it, a quantity of bright grass-green pus escaped from a rent corresponding to the site of an abscess in the white matter of the right cerebellar lobe. The abscess was about the size of a chesnut, and abutted on the surface, a flattened lamina of grey matter alone intervening. The pia mater at the base of the brain was natural, but very vascular. No other abscesses were met with, but seated in the substance of the left corpus striatum, and projecting into the lateral ventricle, was a small opaque-yellow firm encapsuled nodule, believed by Dr. Coupland to be a tubercle, and not an old abscess. In the right posterior fossa of the base of the skull the dura mater covering the petrous bone was thickened, discoloured, and in part separated from the bone by a collection of pus. In the immediate neighbourhood of this change the lateral sinus for the lower half of its course was completely obliterated, or rather converted into a narrower channel filled with pus and surrounded by thick soft walls. On examining the neck there was seen to be considerable swelling and matting together of the tissues on the right side around the track of the jugular vein and beneath the anterior margin of the sterno-mastoid muscle. A large group of reddened and swollen lymphatic glands embedded in fat covered the vessels from the mastoid process to a level with the thyroid body. The jugular vein throughout its entire course was bounded by a firmly adherent thrombus of a dusky grey colour, and permeated by a narrow pus-containing channel. The thrombus terminated at the junction of the jugular with the subclavian vein, and from this point onwards along the innominate a non-adherent partly decolorised coagulum extended into the vena cava and the right auricle. The right ventricle also and the left auricle contained coagula of recent origin. The heart's tissue appeared to be healthy.

In the right pleural cavity was found fully a pint of chocolate-coloured foul-smelling fluid. The pleura itself was coated above and on its posterior surface, by a thin ash-grey false membrane, below and anteriorly by a thick layer of soft granular lymph. Beneath this last-named layer of lymph were found the remains of a pyæmic abscess in the lung, and the whole of that organ was studded with pyæmic infarctions in all stages of development, from small firm nodules of hæmorrhagic nature, and other nodules, purulent or puriform in the centre, and dark-red at the circumference, to abscesses of the size of hazel nuts, with ill-developed lining membranes. Between the infarctions and the abscesses the lung-tissue was intensely engorged. Beyond a small area of vascularity there were no appearances of pleurisy on the left side. There were, however, numerous capillary ecchymoses in the visceral pleura, and the left lung was pervaded with pyæmic formations as freely as its fellow. The peritoneum was natural. The spleen was large, pale, and soft. The liver was pale on the surface, and on section presented a swollen, glistening character, the lobules being ill defined, and the consistency of the organ diminished. The cortex of each kidney was infiltrated and bloodless, contrasting strongly with the pyramids, which were full of blood.

After the autopsy the temporal bone was examined at leisure, and sections made through various parts of the petrous portion. The internal auditory meatus contained a small quantity of pus, and its lining membrane appeared to be thickened and discoloured. The membrana tympani also was thicker than natural, and at its lower margin showed a perforation which would admit a probe. The tympanic cavity, as well as the vestibule, the semicircular canals, and

the cochlea, were filled with a whitish-yellow caseous-looking material, evidently cemented pus. The walls of the tympanum were discoloured, and some slight discoloration was seen in the upper portion of the cancellous tissue of the mastoid process, and on the floor of the lateral sinus, where it grooves the temporal bone.

Gentlemen,—In the foregoing record of the post-mortem phenomena you see portrayed in their most characteristic features the consequences resulting from caries of the temporal bone, or rather I ought to say from otitis interna, understanding the term broadly as embracing all the structures of the auditory apparatus within the boundary of the membrana tympani. Those features are the following:—Pachymeningitis or inflammation of the dura mater, abscess of the brain, thrombosis of the intracranial sinuses, and pyæmia. Lepto-meningitis, or meningitis simply so-called—*i.e.*, inflammation of the pia mater—is not so commonly or conspicuously present as its predecessors on the list, at any rate in the adult. Strictly speaking, there was no lepto-meningitis in our case; only a high degree of vascularity in the membrane.

The following are the principal symptoms ascribed by authors to abscess of the brain:—Pain in the head, often agonising, convulsions, paralysis, coma, drowsiness, stupor, shivering, pyrexia, delirium, vomiting, involuntary passage of urine and fæces; in a few cases, defective articulation; in still fewer, loss of language or aphasia. Be it understood, however, that these are the symptoms of the acute stage; for in many instances—perhaps in the majority—suppuration may be slowly progressing without a trace, or with hardly the trace, of a symptom to betoken its existence. I have many times in this place dwelt upon the marvellous apathy and long-suffering of the brain—the great centre of sensation and voluntary motion—under circumstances which one would suppose sure to awaken its resentment. Morbid products, so long as their growth is slow, may lie embedded in the brain-substance for many months, unknown and unsuspected, until some determining cause occurs to light up an explosion. You are at liberty, therefore, in a large proportion of cases, to recognise two stages in the career of encephalic abscess—the stage of delitescence, and the stage of activity; the period of smouldering, and the period of conflagration. The first period may be of indefinite duration; the second is variable, lasting from a few days to several weeks.

Abscess of the brain, so far as it falls under the province of the physician, or more precisely, so far as it is unconnected with injury to the skull, may be said to occur in two principal varieties, one originating in disease within or around the bones of the cranium, the other in pyæmia. A few cases there may be of idiopathic abscess; certainly a fair number are on record whose origin was never ascertained. These abscesses, however, were for the most part recorded at a time when the pathology of the brain was ill understood. Apparently the inflammations whence they arose were looked upon as accidents which might befall the brain, exactly as pneumonia or bronchitis might invade the lung from causes unknown or incidental to everyone in the common course of life. As our pathology advances, these unexplained cases retire into the background, and almost, I will not say entirely, disappear. Sir William Gull would seem to dismiss them altogether, and Rindfleisch is equally decided on the point. Cases, it is true, have been clearly traced to ulcerative endocarditis in the septic form, but between this form of endocarditis and pyæmia the line of demarcation is so dim as to be nearly invisible, and the cases themselves offer no valid exception to the rule. For all practical purposes, then, the distinction may remain as it stands. Our own case belongs to the first-mentioned variety—that which originates in the cranial bones—although it is a case of undoubted pyæmia. Let me enlarge upon this point. The case was one of pyæmia, but the abscess in the brain was not pyæmic; it was the direct consequence of disease within the petrous bone, pachymeningitis, and thrombosis of the lateral sinus; it was developed by contiguity alone; its propagation was purely local, and in no degree systemic. The true secondary products of pyæmia were found in the lungs and in the pleural cavity. They sprang from the petrous bone and its surroundings; they differed in their mode of derivation from that origin.

I have spoken of the cranial bones and their appurtenances. This requires a word of explanation. In many cases the bony tissue is itself extensively diseased, and the disease may reach the internal surface of the bone, and so attack the meninges and the brain-substance bodily. In some cases the bony tissues are not extensively carious—nay, they need not be carious at all,—but the contained cavities are the seat of disease. In this second class of cases the abscess is often seated at some distance from the bone within the interior of the brain, and is presumably due to inflammation of a vein, or to coagulation of blood within the channel of a vein, the coagulum invading the vessels of the meninges, and in the end those of the brain-material itself. For all these points in pathology we are largely indebted to Sir William Gull and Mr. Toynbee. In the present case there was no disintegration of bone, only a discoloration.

I have distinguished, medically speaking, two principal forms of encephalic abscess, one deriving its source from the cranial bones and sinuses, the other from pyæmia. You may naturally ask me, Is the distinction drawn absolutely accurate at all times? May not caries and other morbid processes within and around the cranial bones and sinuses as readily give rise *constitutionally* to the products of pyæmia in the brain-substance as they give rise to secondary changes in other organs, and as readily as foci of disease in other organs determine the products of pyæmia in the brain? There is no *à priori* presumption against this view. Multiple and even single metastatic abscesses may be developed in the brain when the source of infection is far distant. Is there any reason in the world why they should not be found there when the primary source happens to be near at hand within the walls of the cranium? The channel of communication would be essentially the same in both cases. The morbific matter emanating from a source within the cranium may indeed attack the lung-tissues, the pleura, and possibly the pericardium, inducing pulmonary infarctions and abscesses, with or without empyema or pericarditis. More than this, it may pass onwards, clear the capillaries of the lungs, and lead to the formation of pus in the joints and their surroundings. Is there any reason in the world why it should not attack the brain in like manner, by the same route, and with the same result? Strange to say, in the whole course of my reading and experience I am not sure that I have ever met with an unequivocal example in point. In other words, given a lesion in the cranial bones along with suppuration in the brain, and apart from all foci of infection elsewhere, I have never been able to assure myself that such suppuration arose from a pervading systemic blood-change. As far as I know, the rule for the vast majority of medical cases is this: the lesion and the suppuration are on the same side of the cranium and its cavity. Were the suppuration owing to pyæmia, the abscesses would be found on both sides, or indifferently on either side. Surely we ought now and then to meet with an abscess on the opposite side? As a matter of fact I have never encountered more than one indisputable case of the kind, and that a most insignificant one in every sense, so that, speaking within the range of my own researches, I should practically disregard this case altogether, and make the rule absolute. Of course the experience of the profession may contravene this canon. Abscesses, more or less numerous, originating under the above conditions may have been discovered or may yet be discovered on the side of the brain opposite to the lesion. This would at once prove my main contention to be wrong, and all its corollaries and the distinctions founded upon it would fall to the ground. If, on the other hand, that contention is right, then it is a marvellous fact, and one that passes all understanding, when we reflect upon the close relationship between pyæmia and bone-disease. It is true, abscesses of the brain might be ascribed—may have been ascribed—to a local and limited pyæmia, and it must be admitted that they present some analogy on a small scale to the phenomena and processes of general blood-pollution, when they are deep-seated and separated from the offending bone by a broad barrier of normal nerve-substance. Such limitations, however, in the meaning of the term appear to me undesirable. In my opinion, pyæmia ought to be regarded as universal in its scope and as co-extensive with the blood itself.

Perhaps it would only be fair dealing to take note of certain allegations and assumptions that might be made in antagonism to the views here propounded. It might be alleged that there is scant evidence for the development of secondary abscesses *in any of the viscera* beyond the lungs in the cases under discussion; and, indeed, it would appear

that few, if any, derivative lesions are ever transmitted from a focus of *disease* within the bones of the cranium to the spleen, the kidneys, or the liver. If, then, all these organs escape contamination, why should the brain suffer? it may be asked. Where is the mystery of the brain's exemption from the ravages of pyæmia? All this is nothing to the main purpose; it only widens the field for wonder, and the old dilemma reappears under a new form. How comes it to pass in these cases that secondary appearances are so seldom disclosed in the viscera beyond the lungs, in the brain or elsewhere? Again, it might be assumed that the brain-tissues in the neighbourhood of the primary lesion are by that very vicinity undermined in structure, and rendered prone to dissolution at the touch of pyæmia. Hence it may well be that pyæmia, engendered in the bone and propagated through the medium of the lungs, will not assail indifferently the one or the other side of the brain, but will fasten by choice on the side contiguous to the lesion—the side predisposed for the reception of the virus. Even in true pyæmia, then, from the nature of the case the secondary changes might be expected to occur in the corresponding hemisphere, and it would be wrong to ascribe unilateral abscess there as a matter of course to local propagation alone. Let this argument go for the utmost it is worth: it only establishes a preference for one side, not an exclusive attachment to it; and nothing short of this will avail to explain the phenomena as the results of pyæmia proper. A certain proportion of cases might fairly be claimed for the opposite side. No such proportion exists, as far as I know. One undoubted case of this nature, and one only, have I ever encountered. It was under the care of Dr. Greenhow. The mastoid cells on the right side were discoloured, and contained pus in the fluid form. Masses of concrete pus filled the right tympanic cavity. The right lateral sinus and jugular vein were occupied by a suppurating clot, the suppuration reaching down to the subclavian vein, where the outlet was closed by a rounded coagulum. Numerous characteristic secondary abscesses were scattered throughout the lungs. A minute abscess, about the size of a grain of wheat, was seated in the white matter of the left posterior lobe, near the inner margin of the convolutions. Now, if this is not to be numbered among the unexplained and inexplicable cases, I am of opinion that it must be traced locally to the disease within the bone. At any rate, the entire issue may be formulated thus. It is infinitely more probable that an abscess should for once arrive at the opposite side of the brain by local transmission from the diseased bone, than that it should never more than once arrive there from the same starting-point by systemic dissemination. Be that as it may: let Dr. Greenhow's case be a true example of secondary abscess, the outcome of pyæmia from otitis interna, it is but one out of a multitude of cases; add, if you please, my own case, with its small encapsuled nodule, believed by Dr. Coupland to be the remains of a tubercle: they are but two cases among so many, and cannot shake the main distinction drawn between the principal varieties of encephalic abscess—a distinction sufficiently near the truth for the time being, until fresh cases are forthcoming to annul it.

The symptoms usually assigned to inflammation of the dura mater are these:—Severe rigors recurring in paroxysms and often simulating those of ague, high fever, headache, vomiting, intolerance of light and sound, convulsions, and it may be pyæmia. Add to the above paralysis and coma, which are especially apt to follow when the pia mater is involved in the inflammation. No great amount of difference, you will say, symptomatically between pachymeningitis and the acute stage of abscess. Certainly not; but you must take the symptoms as a group, and, given bone-disease, the pathological changes are so often associated that the community of symptoms becomes a matter of no moment in practice. Again, the symptoms of thrombosis will not differ essentially from those of pachymeningitis. You would naturally expect this, inasmuch as the wall of the sinus is only a prolongation of the dura mater, a fold or reflexion of that membrane. One point requires to be emphasised. When the sinus is blocked by a foul decomposing clot, the danger of systemic infection is more imminent than when the channel is unobstructed and free. Our own case is remarkable in this particular, that the coagulum attacked the jugular vein, and in its descent accounted well for the descending pain, which, first assailing the head, passed downwards along the neck, and then occupied exclusively the right side of that region over the path of the thrombus. It was not, however, the thrombus alone nor the accompanying phlebitis that determined the pain in question. The tissues around were all coincidently inflamed and played their parts severally in its production. On the other hand, the disintegrating thrombus played the foremost part in the determination of the pyæmia.

On the pyæmia in our case there is no necessity to comment at length. It belonged to the unequivocally embolic class. All the coarse and conspicuous lesions were seated on the hither side of the barrier interposed by the capillaries of the lungs. The finer fragments drafted from the decaying clot in suspension or in solution might indeed surmount that barrier and spoil the wholesome crasis of the systemic blood, but the grosser *débris* lodged bodily in the bifurcations of the pulmonary artery, and there established blocks as prone to retrograde and degenerate as the primordial thrombus itself. Corresponding changes ensued in the pleural cavity through simple continuity of tissue.

Pyæmia may be caricatured by a whole host of diseases—in fact, by all diseases which present the phenomena of hectic and typhoid symptoms combined. As a rule, however, the thermometer will set at rest the differential diagnosis. In our case the chart alone was decisive on the point; and when interpreted with the aid of the context, proved, beyond the possibility of a doubt, that the lungs were the seat of dangerous and swiftly advancing secondary processes.

In speaking of the treatment of pyæmia it is unnecessary to dwell on the importance of anodynes, soporifics, stimulants, and restoratives, powerless though they may be for any permanent good. Among real remedies, if they have any existence at all, the most popular is quinine in large—I might say in enormous—doses. Quinine, you are told, is antiseptic, antiphlogistic, antiperiodic, and antipyretic. Now, with all these associated antagonisms it ought to be a very powerful agent indeed. If it have any influence in checking the course of pyæmia it is chiefly in virtue of its antiseptic and antiphlogistic powers. Quinine destroys the life or paralyses the movements of bacteria, vibriones, and all the legions of living molecules that are believed to infest the blood in pyæmia and its congeners: hence it is antiseptic. Quinine destroys or deadens the movements and migrations of the white corpuscles of the blood, and so modifies the processes of inflammation and suppuration: hence it is antiphlogistic. In one or other of these ways, or in both ways at once, it may save the vital viscera from the taint of corruption, and thus avert the approach of death for a while, or even, it is said, sometimes for a permanency; but once let those viscera be "touched corruptibly," and then death is imminent, and the drug is simply thrown away upon the disease. With the antiperiodic powers of quinine we have no concern: there is no such thing as periodicity in pyæmia; quite the reverse. As a pure antipyretic, as a mere refrigerant, apart from all other modes of operation, it is inconceivable that quinine can be of any material use where the blood is so profoundly altered as it is in pyæmia. I repeat, it is mainly useful as an antiphlogistic and antiseptic. Other antiseptics have been brought to bear upon the disease—sulphocarbolates, hyposulphites, and the like: they are all, I fear, unavailing. Recollect, however, that we were not concerned with pyæmia alone, but with cranial and intracranial changes, which called for a different course of procedure, and forbade the unlimited use of the routine remedies. I never gave a single grain of quinine, believing it to be an utterly forlorn hope as against pronounced pyæmia, and fearing that it would only aggravate the vomiting, which I endeavoured to hold in check to the best of my power, but for the most part in vain. I endeavoured also to mitigate pain and to control cough and dyspnœa. These ends we may have achieved in some measure; we may even have prolonged life and postponed death for a few days or for a few hours; but the main purpose of all medication lay far beyond the range of all our resources.

One point deserves to be especially noted. You may be startled, perchance, at the free use of opium in the case of a child, and above all in a head-case, so prone as all head-cases are to terminate in coma. Bear in mind, however, that the child was suffering sheer agony. Bear in mind, moreover, that when a medicine has many properties and powers, and when the requirements of the system demand that one of these shall be concentrated upon a symptom of

surpassing gravity, all the remaining powers may lie dormant. To put it in a simpler form: when a medicine, from the nature of the case, tells strongly in one direction, it may easily fall short of its average mark in another. Opium, for example, is called upon to combat imperious, insufferable pain: it may spend all its force and exhaust itself in the effort; it may have no energy left to narcotise or to endanger life in any other way.

CROONIAN LECTURES.

ON SOME POINTS IN THE PATHOLOGY AND TREATMENT OF TYPHOID FEVER.

Delivered at the Royal College of Physicians of London.

By WM. CAYLEY, M.D., F.R.C.P.,

Physician to the Middlesex Hospital and to the London Fever Hospital; Lecturer on Medicine to the Middlesex Hospital School of Medicine.

Lecture III.

(*Continued from page* 446.)

We may divide the symptoms of typhoid fever into two classes—first, those due to the general febrile state; secondly, those depending on the local lesions. With regard to the former, we may distinguish those cases where the treatment has been applied from the first, and the fever prevented, as it were, from getting the upper hand, and those where it has not been resorted to till all the symptoms of the typhoid state have been allowed to become fully developed.

In order to show the effect which we not infrequently obtain even in the latter class, I will briefly narrate a case which has recently been under my care.

Arthur C., aged twenty-two, was admitted into the Middlesex Hospital on the afternoon of November 17, the twenty-first day of his illness. On October 26 he had been attacked by rigors, followed by the usual symptoms of fever, and on the 29th he took to his bed. On the following day diarrhœa appeared. On November 2 he became delirious, and had so continued more or less till his admission.

The case then seems to have been a very severe one from the first. The onset was sudden; the patient took to his bed on the fourth day, and became delirious on the eighth.

On admission he was very prostrate and in a state of stupor, from which, however, he could be roused by loud speaking. Pulse 144; temperature 104·6°. My clinical assistant ordered him to be sponged with cold water, and at 6 p.m., the temperature being still 104°, gave him twenty grains of salicylate of soda. The temperature fell to 102·2°, but at midnight was again 104°. He now administered thirty grains of quinine; this caused vomiting, which continued during the night. (I may say I never give these remedies under such circumstances, where there is much stupor; far better results are obtained by bathing, with less risk of causing unpleasant symptoms.)

When I saw him at ten the next morning, he was in a state of profound stupor, from which he could not be roused; his face was livid and dusky, pupils dilated, muscles tremulous; pulse so small and irregular that it could not be accurately counted, but was about 160; respirations 36; temperature 103°. There were fine crepitant râles audible all over the chest, extending to the apices.

I ordered him a pint of champagne and eight ounces of brandy daily, and a mixture of hydrocyanic acid and soda to check the vomiting (which it did not do), and directed him at once to be put into a bath at 65°. He remained in it for fifteen minutes, and when taken out was shivering violently. this I regarded as a favourable sign, as it indicated that the nervous system retained its powers of reaction.

At mid-day he was still shivering, and though still in a state of stupor his general appearance had improved. At 2.15, the temperature having risen to 104°, the bath was repeated at 70° for ten minutes, and again at 4 p.m.; but this last had so little effect that another was given an hour later. At 7 p.m. a fifth bath was given, and at 11 p.m. a sixth. This frequent repetition was necessitated by the rapid rise of temperature and the recurrence of the alarming coma.

During the day he vomited everything he took. Feeding by the mouth had to be desisted from, and an enema of beef-tea, brandy, and opium was administered every three hours.

At 3 a.m. on the 19th a seventh bath was given, and at 6 a.m. an eighth. When I saw him in the afternoon his condition was manifestly improved: the stupor had passed off; he put out his tongue when told, and tried to speak; the vomiting had ceased. Pulse was now 132, of better quality; temperature 101·6°. From this time a slow but steady improvement manifested itself, but the temperature continued to rise a few hours after each bath, and they had to be repeated at gradually increasing intervals: Thus during the first twenty-four hours eight baths were given, during the second twenty-four hours, also eight; during the third, six; during the fourth, four; and they had to be occasionally given up to November 30.

His recovery was much retarded by the state of his lungs, which were very slow in clearing up. Not only was there universal capillary bronchitis, but also, no doubt, lobular pneumonia, for when the stupor passed off he began to cough and to bring up characteristic rusty sputa; but from his great prostration it was impossible to examine the bases of the lungs with any accuracy.

I may say that in this case the urine was highly albuminous; but, as the temperature fell, the albumen gradually decreased, and had quite disappeared before the baths were finally left off.

In the autumn of last year I had the satisfaction of successfully treating in this manner a member of our own profession. Here the symptoms were also of extreme gravity—delirium, stupor, universal muscular twitchings, not only of the extremities, but also of the face, inability to protrude the tongue, accumulation of mucus in the bronchial tubes, an irregular pulse of 140, and albuminuria.

This gentleman's father, himself a physician of large experience in the treatment of fever, when the cold baths were proposed, said he had a horror of them; but the effect of the first bath was completely to convert him, and he afterwards encouraged me to persevere when from the patient's extreme prostration my own resolution had begun to fail. In this case the temperature was never very high, only once reaching 104° in the axilla.

Such, then, are the effects which we sometimes obtain from the baths when they are resorted to in the later stages of the disease; but such results must necessarily be exceptional. We ought, therefore, rather to aim at preventing patients from falling into this condition, than trust to the very doubtful chance of rescuing them from it. Now, all observers who have tried this mode of treatment agree that when it is applied from the first, and the temperature steadily kept down by any of the modes I have mentioned, these so-called typhoid symptoms—the febrile oppression, the delirium, the stupor, the subsultus, the fuligo, the dry brown tongue—do not occur at all, or at any rate in a much slighter degree.

We have now to consider the effect of the persistent reduction of temperature on the local lesions, and especially the intestinal sloughing and ulceration to which the fatal event is so often due, usually from hæmorrhage or perforation, sometimes more indirectly from inducing a state of marasmus.

With regard to perforation, we must distinguish between the two main forms of this complication. In the first place, we have the early perforations which take place during the detachment of the slough, and which usually occur during the third week, sometimes as early even as the twelfth or fourteenth day. These are due to the typhoid infiltration extending into and through the muscular coat, so that when mortification takes place, the peritoneal covering, whose nutrition depends on the integrity of the subjacent tissues, itself dies and becomes detached. In examining the intestines of patients who have died at this period of the disease, I have frequently observed small patches of the peritoneum, corresponding to the infiltrations, to be slightly opaque and yellow; and sometimes, in washing the intestine with a stream of water, these opaque patches of peritoneum will separate, exposing the subjacent infiltrated tissue. The perforations which thus occur from separation of the primary slough are often of very large size, so that one may sometimes even put the tip of the finger through them.

The later perforations, which are liable to occur at any time after the separation of the sloughs up to the establish-

ment of complete convalescence, are due to the typhoid ulcers not granulating, but becoming atonic and gradually extending. These later perforations are generally very minute.

Now, whether the ulcers granulate and heal, or pass into the atonic state, depends chiefly on the gneeral condition of the patient, and the less his system has been shattered and his tissues degenerated by the febrile process, the less likely is this complication to occur. Hence, any mode of treatment which lessens the injurious effects of the fever cannot fail also to diminish the frequency of these later perforations.

With regard to the early perforations, which are due to the depth to which the typhoid infiltration has gone, the effect of reducing the temperature is less obvious, and if the process is to be influenced at all it is evident that the treatment must be applied from the very commencement of the disease, and, when this is done, Dr. Brand claims that these complications never take place, and he has now treated in private practice 211 cases in succession without a single death or the occurrence of these accidents; but after the first few days, whatever good effects the bathing may have on the fever, the control of the typhoid process on the bowel is lost, and the infiltration and sloughing will run their course unchecked.

Arterial hæmorrhage may, like perforation, be divided into two classes—the early and the late,—and their pathology and causation exactly correspond.

On the whole, the effects of the antipyretic treatment appear to me to be most favourable where the general febrile symptoms predominate over the local intestinal symptoms, and least favourable where the latter predominate over the former; but, according to the experience of Dr. Brand, provided the treatment be begun at the very outset of the attack, an equally favourable effect is produced on both.

Granting, then, the general efficacy of the antipyretic treatment, we have next to consider whether it is adapted to all cases and ought to be indiscriminately applied. To this I think we must answer that under no circumstances ought we to allow the temperature to maintain itself continuously above 102°. But the means employed to reduce it must vary with the condition of each case.

The most efficacious and most generally applicable of these methods—the cold baths—may be inadmissible. Sometimes the patient cannot bear them; they may cause a dangerous depression or even syncope. As a rule, persons advanced in life and of impaired constitution are less able to support the baths, but these are the cases in which it is especially important to prevent the injurious effects of the temperature. If necessary, then, we must have recourse to the graduated bath, to cold packing, cold sponging, cold compresses, together with quinine and digitalis. The cold bath may likewise cause other unpleasant symptoms, as cramps and neuralgic pains. I have recently had under my care, in the Middlesex Hospital, one of the nurses, in whom the early symptoms were extremely severe. The temperature on the third day exceeded 105° in the axilla, and it was with great difficulty controlled. She had twelve cold baths, but the last two caused very severe neuralgic pains, principally in the sciatic nerves, so that they had to be discontinued, and we were compelled to resort to the graduated bath, sponging, packing, quinine in thirty-grain doses; and by these means, after the obstinacy of the temperature had been broken, as it were, by the repeated cold baths, we succeeded in keeping it under.

Another question of great importance is whether pneumonia, bronchitis, and congestion of the lungs are induced or rendered more severe by bathing. I think to this question we may give a negative answer. In typhoid fever the former are probably due to the action of the poison, and the hypostatic congestion to the failure of the heart, and they are usually manifestly benefited by reducing the temperature. With regard to pneumonia, it is now the common practice in Germany to treat the idiopathic form of the disease in the same manner, and with excellent results.

Cold baths are generally regarded as contra-indicated in those cases where the patient is the subject of venous congestion from chronic bronchitis, emphysema, or cardiac disease. Dr. Glénard gives an interesting case of a man, aged fifty-three, one of the male nurses in the hospital at Lyons, who had been employed in bathing the typhoid cases, and was himself attacked. This man suffered from chronic bronchitis and emphysema, but was so convinced of the advantages of the bathing treatment that he insisted on its being applied to himself, and he took sixteen baths, but the later ones produced such alarming suffocative attacks that they had to be discontinued. He ultimately made a good recovery.

The occurrence of profuse intestinal hæmorrhage and of peritonitis is an absolute contra-indication to bathing, which indeed has been accused of rendering the former complication more frequent by inducing congestion of the intestinal mucous membrane and increasing the blood-pressure in its arteries. Whether it really produces these effects is, however, very doubtful. Dr. Glénard performed the experiment of exposing and opening the intestines of rabbits, and then immersing the animals in cold baths, taking care that the water did not come into contact with the intestine, and the effect was to blanch the mucous membrane. I need hardly say that we are constantly in the habit of treating internal hæmorrhages on the principle that the external application of cold causes a reflex contraction of the vessels of the subjacent viscera. In hæmorrhage from the lungs we apply an ice-bag to the chest; in hæmorrhage from the stomach, to the epigastrium; in hæmorrhage from bladder or uterus, to the hypogastric region; and no doubt with good results. In all probability, where the general surface is cooled, as by a cold bath, the blood tends to accumulate in the muscular layers of the body rather than in the internal organs. Statistics also show that bathing does not increase the frequency of hæmorrhage. The reason why hæmorrhage renders bathing inadmissible is the necessity of keeping the patient perfectly at rest, lest by any movements we should displace coagula or increase the rapidity of the circulation. In these cases, then, we must arrest the peristaltic movements of the intestine by opium, apply iced compresses to the abdomen, administer styptics as ergotine and digitalis, which latter also has the advantage of lowering the temperature. If, in spite of the hæmorrhage, the temperature again rises, we can give quinine and sponge the patient with cold water. In peritonitis rest is still more imperative, and we must have recourse to the same remedies with the exception of the styptics. Very commonly, however, both hæmorrhage and peritonitis themselves induce great depression of the temperature.

(To be continued.)

Prof. Pirogoff's Jubilee.—According to the *St. Petersburg. Med. Woch.* (April 24), great uncertainty has prevailed as to the time when the jubilee of the greatest Russian surgeon should be celebrated, and he was much surprised at receiving numerous congratulatory telegrams on March 8. A thorough investigation of documents shows that this date is wrong, for he received his diploma in the Moscow University in 1828, so that the fifty years had passed away a year or two ago. But as he entered the public service on May 24, 1831, it is proposed to celebrate the jubilee on May 24, 1881.

Battey's Operation.—This operation seems to have become quite a rage in America. We quote the following from the *New York Medical Record* for April 10:—"The operation for the removal of the ovaries was performed on a patient in the New York Lunatic Asylum a short time ago. The patient was a young woman who had been insane for some time, but who had of late been suffering from attacks of epilepsy. It was thought that the insanity, or at least the cataleptic attacks, were due to some irritation of the ovaries, and their removal was undertaken. Not much change in the organs was found. The patient died at the end of the third day. A daily paper of this city, which is building up a reputation for scurrilities, learned of the occurrence, and published a long article misrepresenting and condemning the whole thing. The operation was skilfully performed, and the indications for it were quite as full as they ever are. Battey's operation, however, is still *sub judice;* its dangers are great, its promise of good always uncertain, and there is something repugnant in its unsexing a human being. The greatest care is therefore needed in diagnosing the proper cases—if there are such—for operation. A few months ago this operation, or something very near it, was performed in Bellevue Hospital; the patient died. It is to be hoped that both these cases will be reported."

ORIGINAL COMMUNICATIONS.

PRACTICAL NOTES ON THE ORDINARY DISEASES OF INDIA,

ESPECIALLY THOSE PREVALENT IN BENGAL.

By Dr. CHEVERS.

(*Continued from page* 147.)

EPHEMERAL FEVER—COMMON CONTINUED FEVER—ARDENT FEVER.

THERE are very few who do not suffer, within a few days after landing in India, from some form of what used, in old times, to be called "seasoning," or "acclimatising" disorder. The minority are attacked with dysentery or Asiatic cholera; the majority pass through a less severe ordeal of catarrh, or diarrhœa, or fever. The fevers to which new arrivals are especially liable are Febricula or Ephemeral Fever, the Febris Continua Simplex of the College of Physicians' nomenclature, which formerly appeared in the army medical returns as "Common Continued Fever" or "Febris C. C.," and Ardent Fever.

Physicians have never been agreed with regard to the true nature of these fevers, and I believe this question to be as much open to controversy to-day as it has ever been. Thus, although these fevers may appear in temperate weather, they are especially prevalent in hot climates; but is the moderate Ardent Fever which now shows itself during the hot dry weather preceding the rains in Bengal the deadly malady described under that title by Twining in 1835?(a) Again, are the Febricula, Continued Fever, and Ardent Fever of, let us say Bermuda, Aden, and the hotter and drier parts of India, identical with these diseases in Bengal? Still again, was not much of that Febris C. C., which used to figure so largely in the medical returns of European troops serving in India, Paludal Remittent, neglected Intermittent, True Enteric or Relapsing Fever, or some or any imperfectly differentiated fever which the observers of fifty years ago may be pardoned for having ranged under this indefinite but very comprehensive heading, seeing that the London College of Physicians are still content to define Simple Continued Fever as "Continued Fever having no specific character"? Certainly, within my own time, the ideas of many otherwise well-informed Indian practitioners upon this subject were, at once, loose and discordant. Many years ago the charge of certain wards was equally divided between an able and experienced brother officer (now deceased) and myself. Having occasion to look over a vast number of my colleague's bed-head tickets, I exclaimed to myself in surprise: How comes it that he has treated hundreds of cases of Febris C. C., and that my tickets do not contain one of these entries? Indeed, during the whole of my Indian service, I never recorded a single case as Common Continued Fever or Ardent Fever. A few days ago, I asked an admirable physician who served with European troops throughout the Burmese War of 1852-53, during which deadly fevers were extremely prevalent, "What used they to call Febris C. C.?" He replied, with a smile, "The men used to run about in the sun and get fever, which they used to call Common Continued Fever."

I believe that I have always, since the occurrence of my first case, been well acquainted with the cause and nature of the Febricula, Simple Continued Fever, and Ardent Fever of Bengal (I know nothing, by experience, of these diseases as they appear in other localities); but, strange as at first sight the assertion may appear, I have no doubt that the ease with which I learnt this important lesson was due to the fact that I was absolutely unacquainted with the abundant but most confusing literature of these maladies until many years after I had been in the constant habit of encountering them in practice. I probably owe my success and freedom from great error in this direction to my late dear and accomplished friend and fellow-student Joseph Richard Bedford. When I relieved Mr. Bedford of the medical charge of Chittagong, a few months after my arrival in India, he gave me, in a few words, an admirable sketch of the prevalent diseases of that locality. He said that the most prevalent fevers were of paludal origin, and that they were subject to cinchonism. My own observation speedily confirmed his; and, as I did not see True Enteric Fever until I had served for many years in India, I treated all fevers, with the exception of the Exanthemata, with quinine—the plain result of which is that, from that day to this, *no case of Simple Continued Fever or of Ardent Fever has ever fully developed itself under my observation.* I repeat that I can say nothing from experience of the common continued and ardent fevers of other parts of the world—as, for example, the disease lately described(b) by Surgeon-Major Green as occurring at Aden during a recent cold season, in which, between January 7 and March 1, the evening temperature of a patient was never below 100° except on one (late) day, and during the first four days ranged from 104° to 105°. Probably the type of the disease varies with the climate and with the presence or absence of the paludal poison; but assuredly he who, in Bengal Proper, treats all cases of ordinary fever (excluding Jungle Fever, Enteric Fever, and the Exanthemata) with quinine as soon as perspiration shows itself after the first paroxysm, will find that Febricula is a very ephemeral disease indeed, and that his experience of Common Continued Fever and Ardent Fever is extremely small. I am confident that these three diseases, or, to speak more accurately with Dr. Morehead, these three degrees of the same malady, are, in Bengal, the types in which intermittent fever attacks the robust, full-blooded, and perhaps free-living European who arrives there during the hot weather.

I know no more useful exercise to the mind of a young Indian physician than will be afforded by a careful perusal of the fifty pages in which William Twining records his experience of the Continued or Ardent Fever of Bengal. Up to the time of his death, no Indian physician ever viewed disease more carefully, more honestly, or with more science, according to the light of his time, than Twining did; but, in all probability, nothing that stands recorded upon the shelves of the Medico-Chirurgical Society's library has ever led to so much etiological error, false practice, and sweeping mortality, as the facts and arguments embodied in this well-digested chapter by this truly eminent authority have done. Making allowance for the probability that marsh miasm was more intense in Calcutta in Twining's time than it has been of late years, and that, consequently, the intermittent of the hot season was more severe, it appears to me that all the error in his theory and practice arose from the fact that he did not try his cases of Ardent Fever by the QUININE TEST. Had he done so, instead of vainly endeavouring to subdue the malady by copious bleedings and tartar emetic, his "Ardent Fever" would never have become "Continued Fever,"—it would have been cured after the first day's paroxysm, and would have appeared in his hospital returns, as it invariably did in mine, as Intermittent Fever. What the Intermittent Fever of the hot weather in Bengal would become if we did not stay it promptly by quinine, I do not know: I often wished to know, but I did not venture to expose any patient to the danger of the experiment: but it is probable that a case so neglected would, in a few days, become a fair example of Twining's "Continued" or "Ardent" Fever. It will be seen that quinine entered into the treatment of some of Twining's cases of Ardent Fever, but its use was subordinated to that of copious V.S. and tartar emetic, and was only had recourse to in doses of from two to four grains when, as he expresses it, "a remission of pyrexia afforded room for the employment of quinine." Those who treated Indian Fever by blood-letting committed disastrous havoc by the fatal error of treating that mere name "Ardent Fever," instead of that true entity the Paludal Intermittent of the Hot Weather. I never had recourse to V.S. in any case of Indian fever, however severe the head symptoms might be. In one case, soon after my arrival, I applied leeches to the temples. I felt convinced that they did no good, and I never considered it needful to employ this treatment again. Twining nowhere ascribes Ardent Fever to the Paludal Poison; neither does Morehead, who speaks of this disease as being most prevalent in parts of India where "the conditions of malaria are absent."(c) To Kenneth Mackinnon is due the credit of having ranged Ardent Fever with Paludal Remittent, attributing them to the same cause—the marsh poison. He writes(d):—"Authors on Indian diseases have usually divided

(a) *Op. cit.*, second edition, vol. ii., p. 235.

(b) *Indian Medical Gazette*, July, 1879.

(c) *Op. cit.*, page 161.

(d) The Treatise, page 210.

fevers, according to the season of the year at which they occur, thus: the ardent fever of the hot weather, the bilious fever of the rains, and the congestive fever of the cold season. The first and last it is usual to call continued, and the second remittent, although all three may assuredly be produced by the same remote cause. This may be illustrated by the observed effect of exposure in localities (the forests of Singhboom, for instance) where at all periods the miasmatic cause of fever is rife. That heat alone, and especially solar exposure, may cause fever, independently of malaria, seems a fact admitted on all sides; but we shall often have difficulty in deciding (when fever is prevalent in the hot months) upon which of these causes the prevalence depends. I have elsewhere alluded to our defective knowledge of the whole conditions essential to the generation of malaria, and I have noticed the fact that it may undoubtedly emit from dry surfaces; nor are we to forget that showers frequently fall in the hot months, immediately followed by a hot and dry atmosphere, endowed with wonderful evaporating power. It must also be remembered that in some parts of the country, even during the hot months, there are extensive surfaces which only then are becoming dried up. In these the Ardent Fever of the hot months will have some character in common with Marsh Fever; and in seasons when rain falls, according to my observation, the hot-month fevers will be found to exhibit a periodic tendency even in the open localities where our cantonments and civil stations stand." Mackinnon devotes sixteen closely-printed pages to the treatment of Ardent Fever, under the heads of Bleeding, Use of Cold Water, Purgatives, Mercury, Sedatives, Quinine, and Diet. A perusal of these pages affords an admirable example of an original but most cautious mind struggling to free itself from the trammels of tradition and authority. Thus he commences by saying that "it is in this type of fever that we may use the lancet with the greatest freedom and safety." But, immediately upon this, the wise and observant spirit of reform enters and prompts him to write, with only the break of a semicolon, "but I must yet express my conviction that, even in this disease, it is used too indiscriminately in Indian practice, because I have observed that blood-letting often produces a lasting injurious impression on Indian residents. New blood is not easily made, and it has appeared to me that there is an irritability of constitution and a tendency to local determination caused by the want of blood in proper quantity and quality. I am only arguing that there are many cases of Ardent Fever where general bleeding may be dispensed with." Still, his general treatment of this disease, by bleeding, tartar emetic, strong purgatives, mercury, and opium, is decidedly heroic, and I would not dare to follow the directions for the use of quinine which close his dissertation upon his "sheet anchors" named above. "I make it a rule," he says, "to give quinine in all fevers after the febrile symptoms are gone. As already hinted at, we may, in this fever, notwithstanding its usually continued character, have at times decided remissions and exacerbations. When the remission is well marked, and the complications are not serious, quinine may be given; but we may here wait more for almost if not for complete apyrexia; and I believe it is also correct to say that it is more apt to bring on heat and local determination, if given in this fever too soon, than in regular marsh fever, but there is not so much necessity for using it, and it may be given in smaller doses." Here this eminent authority is not free from the weakness which was general when he wrote, and which has, unhappily, again prevailed largely of late years especially among native practitioners in Bengal, of not daring to give quinine, in periodic fevers, until all heat of skin and headache are arrested. Just as Mackinnon wrote this, Indian medical men began to perceive, mainly in consequence of the facts and arguments of Drs. Hare and A. C. Macrae,(e) that we can administer quinine without risk and with excellent effect in severe cases of paludal fever while headache remains and the skin remains hot. In cases of the ardent fever of the hot weather, and in all other serious cases of paludal fever, I gave quinine as soon as a little moisture could be felt behind the ears or on the inside of the wrist. I never found it interrupt the advance of defervescence. In an ordinary case I gave one six-grain dose of the alkaloid with a quarter of a grain of ipecacuan, to be followed by three-grain doses of quinine every three hours, and a double dose at any sign of the return of fever. In cases of Ephemeral Fever or Febricula, I kept the head cool and used ipecacuanha freely during the hot stage, and gave quinine in the above-mentioned doses immediately upon the appearance of perspiration, never neglecting that free but moderate purgation which is indispensable in all cases of malarious fever. I very rarely saw pyrexia recur in any case so treated. I shall return to this subject when I have to speak of the other paludal fevers, but I shall here give two cases which are fairly illustrative of the fevers now under consideration.

The first was one of severe Febricula, such as is frequently seen among sailors in the port of Calcutta during the sunstroke weather which precedes the Rains. A handsome, fresh-coloured young seaman was brought in with strong fever, flushed face, congested eyes, and very severe headache. I said to him, "Your skipper has made you work over the ship's side in the heat of the day?" He replied, "Yes." Knowing what often occurs in a day or two after a ship arrives after a long voyage, and seeing that the insides of his hands were tarry, and the outsides red and blistered, I had no difficulty in recognising the cause of his attack. Captains of the lower class, being unwilling to employ native painters, compel their men to smarten up the sides of their shabby, weather-stained crafts. A more dangerous position than that of a full-blooded sailor hanging for hours, in sunstroke weather, between the torrid sky and the glassy river can scarcely be imagined. We had some little trouble with this man's case; but, by keeping his head cool, giving him plenty of ipecacuan and salines, throwing in quinine immediately perspiration followed vomiting, and purging him freely, he steadily recovered.

Ten years ago, I was sitting at office work in my quarters at about mid-day, experiencing certain moderate but very definite head-symptoms which always warn me that the day is one upon which we may expect cases of sunstroke, when I was called to visit our House-Surgeon, who had been taken suddenly ill. Dr. —— may be described as an excellent specimen of a well-conditioned young Scotch gentleman, of rather sanguine temperament, not long resident in India. He was partially insensible, but complained of his head, and had the dry and burning skin of insolation. Although I had seen a great deal of sunstroke, I never doubted that this was a genuine case; and, as I acted, I reflected, as I once did in the case of a young native whom I treated for sunstroke: "Under what law of nature am I, a by no means strong man, allowed to minister to this healthy-looking youth, thirty years my junior? Why does the heat which has struck him down spare me?"

My treatment of Dr. —— chiefly consisted in rubbing, as if planing, his unshaven scalp with smooth masses of ice. This was continued for hours, until after sunset, when he began to express relief and to perspire. I then at once saw that the life of Dr. —— had been placed in imminent peril by an attack of Intermittent Fever, which happened to make its first onset in sunstroke weather. He took quinine, ipecacuanha, and a purgative, and recovered speedily without another bad symptom. Had his case been neglected, he would, I believe, have died that afternoon, and the death would have been registered as one of "Sunstroke." Had he been freely bled and leeched, and drenched with antimony, mercury, and drastic purgatives, he would have probably made a slow recovery from a typical attack of the "Ardent Continued Fever" of the old writers.

(To be continued.)

(e) *Indian Register of Medical Science*, 1848, page 360.

THE PARIS MILITARY HOSPITALS.—In the number for April 24 the *Progrès Medical* calls attention to the impropriety of retaining the overcrowded military hospitals in the populous centres of Paris, where they become foci for the origin and spread of contagious disease. The antiseptic system may meet this objection to some extent as regards surgical affections, but this does not apply to medical affections. It is intended to agitate for the removal of these hospitals in a divided condition to the limits of the fortifications connecting them with the barracks, by establishing between them, as at Berlin, communication by special cars on tramways. The barracks themselves also are in very faulty hygienic conditions, and call for decentralisation.

ON A BLEEDING TUMOUR OF THE IRIS.

By J. R. WOLFE, M.D., F.R.C.S.E.,
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Heteroplasies of the iris are comparatively rare. They are generally either cystic or pigmentous, or, if malignant, most frequently melanotic. The tumour which forms the subject of this communication is very rare indeed. Professor Hirschberg says it is only the second on record, the first being a case published by himself in the *Centralblatt*. He calls the tumour "Granulations-geschwulst."

Mr. C., aged sixty-two, merchant, consulted me in May, 1879, for an eye affection of forty years' standing. He had always enjoyed good health, until one cold winter day he put on thin boots, got his feet wet, and was attacked by severe influenza, complicated with inflammation of the eyes; since that period he has suffered from dimness of vision. His hearing was also affected at the same time; it first became morbidly acute, then dull, and he is now very deaf. He has had no rheumatism or exanthematous disease, and there is nothing remarkable in the family history. He has had eight children, of whom six are alive. One of his daughters, twenty-one years of age, suffers from epileptic fits. His left eye shows diffused corneal opacity from old keratitis; the pupil is not dilatable by mydriatics, on account of a false membrane in front of it, which is not intact, but presents a fenestrated appearance. On the cornea of the right eye there is a thin nebula; the pupil is irregularly dilatable, a tumour being situated upon the iris, from the circular fibres down to the ciliary border, and encroaching upon the membrane of Descemet. When a pencil of light is directed upon it, it seems to have its attachment both to the iris and cornea. It is lobulated, of a dark raspberry colour, and dips deeply backwards into the ciliary circle, in which region opacity of the lens has already commenced. (The figure gives the exact shape and position of the tumour; it shows also large subconjunctival vessels proceeding to it.)

The peculiar characteristic of this tumour is that, at intervals of from four to six weeks, it bleeds and fills the anterior chamber. Vision is obscured for a week or ten days, when the blood is absorbed, and sight re-established.

When it was explained that, from the situation and attachments of the tumour, any attempt at removal was sure to give rise to profuse hæmorrhage and other complications, and also that, at no distant period, the opacity of the lens would become complete, requiring extraction, the patient preferred to do without surgical interference in the meantime, especially as he derived considerable benefit from the application of atropine. But in the middle of October he presented himself with a quantity of blood in the anterior chamber, so profuse as to fill it up and push the iris backwards. In this predicament I recommended a paracentesis to remove the blood. I introduced a speculum and fixed the eyeball with forceps at the upper vertical meridian, and with a broad needle pierced the corneal circumference at the lower margin. The quantity of blood which issued was alarming; and no sooner was the anterior chamber cleared than there was another gush, and we had to do with a succession of these. We were, however, unremitting in our pumping process, until at last the flow of blood seemed to be exhausted, and the aqueous humour was only thinly coloured. Four days after, the anterior chamber cleared up entirely, and since then (now nearly seven months ago) there has been no recurrence of bleeding. This is the longest respite he has had since the beginning. The tumour is now less in size, and the broad base has gradually disappeared. When he first came he could not distinguish any type, but now he can see with the left eye No. 8½ Snellen, and with the right No. 12.

I deem it worth while to record this case, both on account of its rare occurrence, and from the alleviation of the symptoms by paracentesis.

I would remark, in conclusion, on the importance of the operation of paracentesis of the cornea in diseases of the eye. It is not long ago since the profession commenced to perform this operation for onyx and hypopion, but I have done it regularly for at least ten years, not only to relieve onyx and hypopion—where its utility is self-evident (for by allowing the pus to be absorbed by natural processes there is a chance of recurrence elsewhere, or of degeneration of the internal structures of the same or other eye),—but I have also performed it in cyclitis and serous iritis with marked benefit. It appears to me, therefore, that this operation is not practised so frequently as it ought to be for various internal affections of the eyeball.

Glasgow.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

KING'S COLLEGE HOSPITAL.

CASE OF SEPTIC INFECTION OF THE LUNGS FROM NECROSIS OF THE PETROUS BONE.

(Under the care of Dr. JOHNSON.)

[For these notes we are indebted to Mr. F. Willcocks, M.B. Lond., Sambrooke Medical Registrar.]

Edward H., aged fourteen, was admitted into Craven ward, on Wednesday, April 7, 1880. His father's sister died of consumption, and he himself had measles when a child, but there is no history of scarlet fever or other severe illness. Subsequent to his death, it was ascertained from his friends that he had had a discharge from his ear about six weeks before the commencement of his illness, but no further notice was taken of it.

He was first taken ill on Saturday, March 20 (about three weeks previous to death), with sudden headache, pain in the chest, and shivering, but no vomiting. On Tuesday, March 23, he applied at the out-patient department of King's College Hospital, when it was noted that his gait was staggering, and he complained of headache and night-sweats. The tongue was furred, and the bowels were confined; the heart and lung sounds were normal. The temperature was subnormal, being 95·4° Fahr. in the mouth. He was advised to become an in-patient, but was unwilling to do so. He did not re-apply the next week, and nothing more was seen of the patient until admission on April 7. During the interval the night-sweats (rigors?) had continued, and he had had diarrhœa for three or four days with some cough.

On admission (April 7) he was fairly sensible, and complained of headache, but began to wander towards evening. The tongue was dry and brown, and the bowels were constipated. The respirations were very short and catchy, and 60 per minute. The pulse was 138 per minute, and the temperature in the axilla 101° Fahr. The pupils were large and equal, and reacted to light. There was dulness and fine crepitation at the base of the left lung, and the superficial veins over the right side of the chest were noted to be enlarged. The heart-sounds were normal. The urine was of specific gravity 1012, acid, and contained a cloud of albumen. The patient was ordered a jacket poultice, and an ice-bag to the head, which was shaved.

April 8.—The patient lay in a state of muttering delirium, but could be roused to answer questions. The urine and motions were passed unconsciously. The temperature at the morning visit was 101·4° Fahr.; the respirations were short and jerky, and 48 per minute; the pulse was small and compressible, and 138 to the minute. The bowels acted unconsciously three times during the day. The temperature in the evening was 99° Fahr.; the respirations 56, and pulse 144 per minute. The delirium had continued all day.

9th.—He was unable to recognise anyone in the morning, and had been restless and delirious all night. Abundant râles were audible over the front of the chest. The bowels

acted twice unconsciously. There were sordes on the teeth and lips, and the breath was very offensive. The respirations were 44, and the pulse 144 per minute. The temperature was 98·4° Fahr. He gradually sank, and died in the afternoon.

Autopsy.—On opening the thoracic cavity, both pleuræ were found to be acutely inflamed. There were deposits of recent lymph on both surfaces, and each cavity contained a considerable quantity of thick, yellowish-looking fluid. Hæmorrhagic infarctions were scattered throughout both lungs; they were especially prominent at the surface; were wedge-shaped, and in some places had broken down into foul-smelling abscesses, varying in size from a pea to a walnut. The intermediate portions of pulmonary tissue presented the usual appearances of bronchitis; but there was no large tract of consolidation nor œdema. The pericardium was normal. The heart was normal, the right cavities containing dark blood-clots. On tracing up the large veins at the root of the neck, pus was found in the right internal jugular vein; and after removal of the brain a small abscess was discovered under the dura mater, in connexion with the right petrous bone. The abscess was situated in the anterior portion of the right lateral sinus, extending from the apex of the petrous bone to the jugular foramen; the bone in the immediate vicinity of the abscess being denuded of dura mater. The blood in the posterior portion of the right lateral sinus had coagulated, but there was no appearance of pus. The petrous bone itself was much necrosed, the internal ear being entirely disorganised, and the cavity of the tympanum containing some soft whitish-looking material. In the brain the lateral ventricles were slightly dilated, and contained a somewhat abnormally large quantity of fluid. The brain was otherwise normal. The other organs were more or less congested, but showed no appearances of either infarctions or abscesses.

Remarks.—The above is another instance of the grave consequences which may follow a case of neglected disease of the middle and internal ear. The close connexion between the petrous portion of the temporal bone and the lateral sinus renders the absorption of septic material by the internal jugular vein exceedingly probable; and this accident obviously occurred in the present case, setting up purulent infarctions in the lungs, and double pleuritis. The latter was doubtless due either to direct extension from the inflamed lungs, or to rupture of superficial abscesses. The patient's condition during the last three days of life, when he was an in-patient, closely resembled that of a case of acute tuberculosis—the suddenness of the onset on March 20, the severe dyspnœa, the pulse and temperature range, the mental condition of the patient, and the pulmonary physical signs, all apparently supporting this view. It is worthy of note also, that although the disorganisation of the bone was advanced, and must have been of long standing, the amount of discharge from the external auditory meatus was always so inconsiderable as scarcely to attract attention; in fact, as stated in the history of the case, the friends only noticed a slight discharge about six weeks before acute symptoms supervened, and no discharge was observed either when he was examined in the out-patient department, or during the days he was in the hospital.

ST. THOMAS'S HOSPITAL.

A CASE ILLUSTRATIVE OF MECHANISM OF ÆGOPHONY.

(Under the care of Dr. STONE.)

John M., aged twenty-one, coal-heaver, admitted February 6, 1880, stated that, since a fall three weeks previously, his left side had been tender and painful. Cough of a paroxysmal character soon followed the injury, and great shortness of breath accompanied it, increased by lying on the right side.

On admission, temperature 102·2°; pulse 96; respirations 24. Left side of chest dull, motionless. Vocal fremitus absent. Breath-sounds distant and feeble. Distinct ægophony over middle of lung posteriorly. Heart displaced to right. He was tapped the same evening, and thirty-six ounces of clear serum drawn off. Resonance returned at once in the upper part of the left side, with vocal fremitus. The case showed no other peculiarities, and recovered quickly.

In commenting on the case, Dr. Stone demonstrated to his class the following facts:—1. With the ordinary speaking voice, especially on certain words, ægophony was distinct; its pitch being an octave or more above the laryngeal note. 2. With the singing voice, on the note G, ægophony was totally absent; no sound whatever being transmitted. The same negative result occurred when a vibrating column of air was drawn into the lungs by sucking at a chromatic pitch-pipe. 3. When the patient was made to whisper, the sibilant sound and all its inflections were completely transmitted to the listener's ear with unchanged pitch. These phenomena were independently substantiated by Dr. Sharkey and other members of the staff. Dr. Stone considered that this case, among many others, confirmed to absolute demonstration his views already expressed as to the causation of this particular auscultatory sign. In the first place, the presence of fluid in the pleura was certain, as a part of it had been extracted. The sequel of the case proved that there was no other morbid condition. Helmholtz had shown that all articulate speech consists of two elements, the laryngeal, and oral or buccal. The former is a comparatively slow vibration, with a wave-length of four feet, more or less. The latter consists of numerous high harmonic or upper partial sounds, superinduced upon the laryngeal ground-tone by alterations in the resonant cavity of the mouth; these harmonics differ for each vowel, and in some cases, such as the English sounds for A, E, and I, are considerably higher in pitch than the foundation sound. These are just those on which ægophony is loudest. The whispering voice is formed of oral vocalisations alone, with a mere laryngeal hissing, and no musical note whatever. In his opinion, the layer of pleural fluid, which was well known to stop slow vibrations sensible to tactile sense, and termed vocal fremitus, also filtered off, as it were, the coarse waves of the laryngeal note, while it let pass the finer undulations of the affiliated harmonics. The note of the pitch-pipe was also entirely stopped, whereas the whisper was entirely transmitted. The action of the muting sheet of liquid is an exact physical parallel to that of a plate of transparent glass in front of a fire, which stops the bulk of the coarser heat-vibrations, while it allows the more delicate undulations of light to pass with but little diminution. Acting on this analytical view, he had followed Helmholtz in attempting to reproduce ægophony synthetically under purely physical conditions. In this he had fortunately succeeded, and had shown the observation before the Royal College of Physicians. A bladder containing water was placed over a fenestrated india-rubber tube approximately the size of the larger bronchi and trachea. On making a distant assistant speak, sing, and blow a pitch-pipe into the tube, and applying the ear, aided by means of a stethoscope, to the upper surface of the water in the bladder, an exact reproduction of the phenomena named above was obtained.

Paris Night Service.—Dr. Passant, the Director of this Service, reports for the quarter ending March 31, that 1847 night visits were paid by practitioners registered for that service, each of whom received 10 fr. per visit. This is an increase of 462 on the same quarter of 1879. Of the 1867 visits, 642 were paid to men, 881 to women, and 324 to children less than three years of age. In sixty-two instances death had taken place before the visit was paid.—*Gazette des Hop.*, April 29.

Erroneous Medical Teaching.—The *Canada Med. Journal* for March quotes from one of Prof. Bartholow's lectures the following excellent passage:—"No fact is more evident than that the highest order of physicians and surgeons are not men remarkable for their knowledge of microscopy, of experimental physiology, and the other branches of theoretical medical science; and conversely, that the microscopists and pure physiologists are not remarkable as pure physicians, and indeed cannot be. The attempts to pervert the proper purpose of medical schools, and to give a merely science aspect to medical teaching, is a fashion of the time, which, if it gain more adherents, is likely to do serious mischief to the cause of medical education; for young men, allured by the glitter of scientific work, will neglect the important and really more difficult attainments of true professional studies."

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The Medical Times and Gazette *is published on Friday morning: Advertisements must therefore be sent to the Publishing Office not later than One o'clock on Thursday.*

Medical Times and Gazette.

SATURDAY, MAY 8, 1880.

LADY NURSES.

It was but natural to expect that the unfortunate article by Miss Lonsdale in the *Nineteenth Century* for April would bear bitter fruit as far as the cause which she attempts to advocate is concerned. Accordingly, as one outcome of her onslaught, we have no fewer than three articles in the same Review this month, and one in the *Contemporary*. As we indicated last week, the former are from the pens of Sir William Gull, Dr. Habershon, and Mr. Henriques; the last is by Dr. Moxon. Taking these all in all, they strike us forcibly as being too much on the defensive. Somehow or other defenders are rarely so successful as attackers, and what we wonder at in this case is that the war has not been carried into the enemy's camp. Certainly it is open to assault, as we could easily show. Next, as to the essays themselves, three of them refer immediately to the maligned institution (Guy's) itself. Mr. Henriques simply says that, as regards the London Hospital and its nursing, whilst most anxious to improve it in every way, they will have nothing to do with sisterhoods or their ways.

But as regards Guy's, we have articles which are full of matter for thought to those who are earnest in the improvement of hospital *régime*. Sir William Gull seems, perhaps, light and sarcastic, but he can boast of an experience of hospital work which is not often enjoyed. Dr. Habershon is laborious and convincing, but he is not light. Dr. Moxon, for a wonder, is learned, and not the original Moxon; but all are essentially products of Guy's. Perhaps this may be the best plan after all, for it was Guy's which was attacked; though we have heard *sub rosâ* that Miss Lonsdale says she had the "London" specially in her eye when she wrote the offensive article. But if we are to have the matter well threshed out, it is better that broader ground should be taken.

As to the articles themselves, Sir William Gull's in every way claims the first place. Both in this article and in that of Dr. Habershon we can easily recognise the words, the turns of sentences, the writers, almost as speakers; but Dr. Moxon is not himself, if he will permit us to say so, in the *Contemporary*. He does not do justice to that keen instinct and natural penetration which is his; he is lost in a regulation Review essay.

We do not know that there is much to be said as regards these articles beyond what we have already roughly indicated. No new ground is taken, but several facts and observations are worthy of notice. The first we shall take from Sir William Gull's article. After quoting Miss Lonsdale's article as to the former condition of the nursing at Guy's, Sir William goes on to say—"It would seem to anyone unacquainted with the subject that the author of these serious accusations was a person of large experience on the subject she treats of, for nothing less than this would warrant so wholesale a condemnation. The reader may therefore be surprised when I say that these charges rest upon the most limited and superficial experience of the system condemned, the writer having been but a few weeks in the hospital as a learner of the rudiments of nursing." This is light as a feather, but heavy as a sledge-hammer. Miss Lonsdale, it is elsewhere said, had at the time of writing her article a *whole month's* experience of the Guy's nursing under the new system. Of the old she had absolutely no knowledge.

But another quotation from Sir William's article may help us a little farther on our course of investigation as to the cause of this so-called "crisis." He writes thus:—"I fancy I perceive between the lines of this lady's writing, *which is probably not altogether her own*, a feeling of jealousy that the whole of the hospital system is not given up to her party. She even claims that nurses should have a right to exclude, except at certain times, the medical students from the wards." Ay, and the ladies sometimes go farther than this, as we could easily show.

But perhaps Miss Lonsdale is best treated as Sir William does in another sentence. "Of course," he says, "it is not to be expected that this young writer knows much about the subject upon which she exercises her pen; therefore it would be unbecoming of me to press too hardly upon the foolishness of her remarks." This may be the best way to treat Miss Lonsdale, but assuredly it is not as regards her backers. There is a deliberate attempt to oust hospital physicians and surgeons from their proper sphere of duties, and to supersede them and their directions by a squad of half-instructed young women; and they are backed up by a number of the laity, equally presumptuous and not so well informed as the ladies are themselves. This is not to be met by simple defence. Perhaps some one will help us to his experience of lady nurses. At all events, the matter cannot rest here.

ACETATE OF ALUMINA AS AN ANTISEPTIC.

The expense and the want of durability of Lister's carbolic gauze have led to several attempts to replace the carbolic acid by other antiseptics. Of these, acetate of alumina, which was used as early as 1827 by Gannal for embalming corpses, and which has of late been introduced into surgery by Burow, von Bruns, Billroth, and Maas of Freiburg, appears to deserve special attention. It has been largely tried in Professor Maas's wards since June, 1879, and his assistant, Dr. O. Pinner, gives an account of its physical properties, and of the method employed and results obtained in its surgical application at Freiburg, in Nos. 12 and 13 of the *Berliner Klin. Wochenschrift*, 1880, from which the following remarks are abstracted.

The solution of acetate of alumina (for the salt is not stable in the solid form) is made by dissolving 1000 parts

"colloidal alumina," prepared by the firm of Löwig and Co., Dresden, in 800 parts dilute acetic acid. The liquid is filtered after standing twenty-four hours, and contains about 15 per cent. of acetate. For antiseptic purposes much weaker solutions are required. Dr. Pinner finds that a 0·5 per cent. strength will prevent urine or meat infusion from putrefying, while 1·5 to 2 per cent. solutions will stop all movement in a bacterial liquid, as well as sterilise the bacteria, so that no multiplication of them takes place in tubes containing Pasteur's fluid, and carefully isolated. Dr. Pinner does not wish, however, to assert that the bacteria are actually *killed*; to effect this, much larger quantities of this or any other antiseptic than it is possible to use in practice are probably required, as well as exposure to high temperatures. His view of surgical antiseptics is "to create such conditions in the wound as to render the fungi innocuous, unable to cause injurious decomposition, or to penetrate the surface of the wound and enter the blood."

The method of operating with acetate of alumina as an antiseptic, in accordance with these principles, is as follows:—The skin is first washed with 5 per cent. carbolic acid solution in the ordinary way, and dried. The reason for this is that acetate of alumina is not saponifiable. Carbolic acid has also to be used for disinfecting the instruments, as the acetate solution is so acid that it blunts and corrodes them. For every other part of the operation the acetate of 2½ per cent. strength is alone used. Owing to the admixture of steam the actual strength of the spray which reaches the wound does not exceed 1 to 1½ per cent.; but this answers all purposes. The acetate spray never causes anæsthesia of the operator's hands, as carbolic acid is liable to do, but it makes them rather rough. Professor Maas uses catgut for ordinary ligatures, and Czerny's antiseptic silk for atheromatous vessels or for deep-seated or large arteries. The sutures and drainage-tubes are inserted in the ordinary way. For the dressing, the wound is first covered with "protective," and then with loosely folded pieces of gauze, which are pressed firmly over and around it. The gauze has previously been soaked for a long time in 5 per cent. acetate of alumina solution, and wet compresses of the same, one and a half to two metres long and about twenty centimetres broad, four times folded, are used to keep the dressing in its place. From four to eight such compresses are generally needed, the rule being, *e.g.*, for an excision of the knee, to carry the dressing from the lower third of the leg to the upper third of the thigh. The whole is covered with gutta-percha tissue to prevent evaporation, the edges being surrounded with strips of 10 per cent. salicylated wool. To keep everything in place a calico bandage soaked in 2½ per cent. solution of the acetate is used. The dressing is changed on the first or second day after the operation, and then only every fourth or sixth day; it has never been allowed to remain longer than the eighth day. On removal the compresses are found impregnated with the secretion from the wound, which has a sourish smell, and is rather more copious than when dry bandages are used, the moist compresses being more permeable; on the other hand, wounds and the surfaces of stumps have a cleaner look. The healing of the wound takes an absolutely aseptic course. None of the diseases which complicate wounds under the old system (*accidentelle Wundkrankheiten*) occurred in any of Professor Maas's cases. In three cases it was noticed that the acetate of alumina spray exercised an astringent effect, and checked the capillary hæmorrhage from the part which was being operated on. In this respect it is superior to carbolic acid.

The acetate of alumina bandage is cheaper than Lister's carbolic gauze. The colloidal alumina is sold by Löwig and Co. at forty-five shillings the hundred kilogrammes, and dilute acetic acid is also cheap. The compresses can be used over and over again after boiling and re-washing, and they are easily prepared. They adapt themselves well to any part of the body, and can be made to exert an even, elastic pressure on the wound. Eczema never occurs beneath them. Dr. Pinner gives details in his paper of a number of severe operations treated by the above method with success. The acetate has also been used by Professor Maas for permanent irrigations. Professor von Bruns, of Tübingen, first recommended it for this purpose—"severe injuries, especially compound fractures, which come rather late under treatment, cases of extensive sloughing or great destruction of soft parts, or, in fact, any cases where it is difficult to apply an antiseptic dressing successfully, can be thus treated." It is best to begin with a 2½ per cent. solution, and then to reduce its strength to 0·5 per cent., which is found to be strong enough to disinfect and deodorise perfectly.

THE ANNUAL REPORT ON THE HEALTH OF INDIA FOR THE YEAR 1878.

The Fifteenth Annual Report of the Sanitary Commissioner with the Government of India, for the year 1878, presents a remarkable contrast to its predecessor, and forcibly illustrates the statement so often made in regard to tropical countries—that, with outward circumstances and surroundings to all appearances very much the same in two given years, the sickness and mortality in the one greatly exceed those of the other. It must not, however, be forgotten that the statistics of sickness and mortality among the European troops in India during 1877 were more favourable than those of any other year, and induced the assumption—not borne out by facts—that increased sanitary supervision was bearing good fruit. It is not satisfactory, therefore, to be compelled to record that the admissions into hospital per 1000 of average strength exceeded in 1878 those of 1877 by 394, the daily sick by 11 per 1000, the deaths by 8·75, the invaliding by 2·73, and the total loss by 11·48 per 1000. Taking the individual years from 1871, the sickness in 1878 was greater than in any other; the death-rate was higher than in any year except 1872, a year of great cholera epidemic; and the proportion of invalids largest of all. The total loss, in fact, in 1878 (66·44) very nearly approaches the loss of 1872, when it reached a maximum of 67·42. It must, moreover, be understood that these unfavourable results are not due to severe outbreaks of disease in any one Presidency; while a comparison of the statistics of individual stations for a series of years shows that this decrease of sanitary conditions in 1878 is not to be accounted for by exceptional sickness at a few places. Further, there was no marked increase in sickness due to a great rise in any *one* disease, but the most important causes of admission into hospital all show a notable excess.

Sickness was less prevalent in Madras than in the other two Presidencies: both the admissions into hospital and the average proportion of cases daily under treatment were smaller; but the death-rate was slightly higher than in Bengal. In Bombay the mortality was lowest, but invaliding was unusually heavy. The total loss from deaths and invaliding combined was least in Bengal, and highest in Bombay. The most striking points of comparison are—the marked prevalence of enteric fever in Bengal; the relative freedom of Madras from this and other fevers when compared with Bengal, and still more so when compared with Bombay; and the large proportion of cases of dysentery and hepatitis in Madras, as compared with other Presidencies. These points, however, except as regards enteric fever, are merely a repetition of what has been observed more or less in former years. Cholera caused 226 deaths among the

European troops during the year, whilst out of 72 cases of small-pox, 15 proved fatal. There are several important points with respect to enteric fever which are worthy of notice; amongst these was its great prevalence in the Bengal Presidency, where no less than 413 cases were recorded in 1878, or an equivalent of 11·5 per 1000; and the comparative freedom from it of the Madras Presidency, with a return of only 1·9 per 1000. In the Bombay Presidency the admissions from this cause were 4·6 per 1000. The proportion of the cases which proved fatal is also important, viz.—Bengal, 40·68 per cent.; Madras, 61·40; and Bombay, 55·56 per cent. As a whole the death-rate from enteric fever in the European Army of India equalled 3·64 per 1000, or more than double what it has ever been before, except in the year 1872, when the ratio reached a maximum of 1·87. The Report also contains the results of the special inquiry on the spread of enteric fever in Bengal, which was instituted some years ago and was continued during the year. Venereal disease has increased with marked rapidity: in 1877 the cases throughout the European Army in India attained a ratio of 208 per 1000—the highest ratio since 1871, when the statistics for the three Presidencies were first concentrated in one office; during the year the ratio rose from 208 to 271, the details showing a marked increase in the worst variety of the disease. During 1878 the admissions from primary syphilis increased from 65 to 95 per 1000. The Report adds that the failure of the Lock hospital system has thus been general and conspicuous. The comparative youth of the Army, and the diminution in the proportion of married men, although there has been a certain degree of gradual change in both these respects, are insufficient to account for the very great prevalence of venereal disease in 1878. In many cantonments the results for 1878 are worse than in years when no Lock hospitals existed. The existence of widespread distress among the people, tending to drive women to prostitution to gain a living, has been frequently cited in the Reports in explanation of the very unfavourable results; but the connexion between the two requires further proof, the Report thinks, before this explanation can be accepted as accounting for the facts. However this may be, there is ample proof that the measures taken in India up to the present time for the prevention of venereal diseases have proved altogether ineffectual.

The third section of the Report deals with the Native Army of India, and the two most prominent features in the history of 1878 as regards this force were the despatch of a contingent to Malta in the spring, and the advance into Afghanistan in the beginning of the cold weather: the latter added seriously to the sickness and mortality, especially among those who had been suffering from recent fever. The results of the year for this force, as a whole, bear very unfavourable comparison with those of 1877.

The duties of Dr. J. M. Cuningham, the Sanitary Commissioner, are not confined to the two armies, European and Native, but extend to the whole population of India; and the Report, under different sections, deals consecutively with the gaols, with the health of the general population, and the general history of vaccination, etc. In an Appendix to the Report will also be found a very interesting paper by Dr. D. D. Cunningham, Special Assistant to the Sanitary Commissioner, "On the Development of Certain Microscopic Organisms occurring in the Intestinal Canal," which we hope to notice upon some future occasion.

THE WEEK.

TOPICS OF THE DAY.

The adjourned meeting of the delegates from the various metropolitan vestries appointed to consider the question of the London water-supply was held last week at St. Martin's Vestry-hall under the presidency of Mr. E. J. Watherston. There was a large attendance, including Professor Rogers, M.P.; Mr. Fowler, M.P.; Mr. O. Coope, M.P.; and Mr. M'C. Torrens, M.P. The Chairman, in opening the proceedings, said that they had now arrived at a time when it became advisable that the terms of the purchase of the rights of the existing London water companies should be investigated by the highest financial authority to be found in the country. He considered the question ought to be immediately submitted to Mr. Gladstone, and he concluded by moving that a memorial be prepared for presentation to that Minister. Mr. Torrens observed that he had never in all his experience seen so much unanimity on any great public question as prevailed on the leading points of the Water Bill, and in opposition to it. He thought we ought to get a suspensory Bill till the end of the next session of Parliament, to allow time to consider and prepare another measure, so that no additional exaction should be made in the amount of the purchase-money. The meeting unanimously resolved that a deputation be appointed to seek an early interview with the Prime Minister, the Home Secretary, or other Ministers, to urge the passing of a Bill without delay, suspending, till the end of next session of Parliament, the power of the water companies to augment the charges made by them in the metropolis, and that the metropolitan members be invited to join such deputation. In connexion with this subject it is also to be noticed that at a recent meeting of the Social Science Association it was unanimously resolved that, in view of the approaching re-assessment of the metropolis, a memorial be presented to Mr. Gladstone, praying him to take immediate steps to deal with the water-supply. As we remarked a short time since, when writing on the water-supply question, the desire is universal to secure some satisfactory reforms, and the new Government has an excellent opportunity afforded it of achieving deserved popularity by well-considered legislation in this direction.

The anti-vaccinationists would appear to be getting somewhat weary of an opposition which only results in the infliction of fines upon themselves, and in two instances they have adopted active measures for enforcing their views. At a recent meeting of the Brighton Guardians a letter was received from Dr. Ross, one of the medical officers, calling attention to the conduct of a member of the Board at his vaccination station. It appeared that the person complained of was one of the new members recently elected on the Board, and supposed to have been elected as representing the anti-vaccination party at Brighton, and he had told the parents of children attending to be vaccinated that he was surprised that they should bring their offspring to the station to be polluted. When remonstrated with by Dr. Ross he used insulting language. He admitted the truth of the statement made by Dr. Ross, but refused to make any apology when called upon by the Chairman of the Board to do so, but began to enlarge upon the "sufferings" inflicted on poor infants by vaccination. A resolution was, however, passed almost unanimously, expressing the great regret of the Board at the conduct of one of their members, and assuring Dr. Ross that no one had a right to be present as a visitor at any vaccination station. At Oldham, however, the opposition has taken a more serious form. Mr. John Woodcock, the public vaccinator of the town, has lately received several threatening letters, and an infernal machine, consisting of a tin containing powder and some missiles, has been found in his garden. Ignition was provided for by means of a spring which moved on touching the top of the contrivance.

In some of the reports recently received from Rome it is stated that measles are very prevalent, several adults having

been attacked by the disease, which is, however, of a very mild type; and a few instances have occurred of the same persons being assailed by the disease a second time, after recovery from the first attack. Some cases of small-pox have also occurred. The English and Americans in Rome are reported not to have wholly escaped from these disorders.

Dr. Dumontpallier has lately introduced at the Hôpital de la Pitié, Paris, a new apparatus for the treatment by refrigeration of persons suffering from typhoid fever and other diseases. It consists of a coverlet formed of a tube of caoutchouc eighty metres long, bent to and fro in a series of equal lengths, and enclosed between two pieces of cloth. The tube is traversed throughout by a current of cold water, its two ends communicating with a distributing apparatus placed on a table at the foot of the bed. This apparatus is fitted with two stopcocks in a parallel position, each with an adjoining cylindrical metallic case, from which the stem of a thermometer projects. The stopcocks are connected with the two ends of the coverlet tube, and the cases are connected on the other side, one with the tube from a reservoir, the other with the tube of outflow for the water that has been used. The tube from the coverlet to the stopcock of the outlet is arranged to send the water through a small glass bell-jar on the table, which enables the regularity of the flow to be checked, while the thermometers indicate the temperature at which the water enters and leaves the coverlet. The apparatus is said to be highly sensitive; a slight alteration of the orifice of one or other of the stopcocks, or of both simultaneously, is followed almost immediately by thermometric variations. The weight of the patient has, of course, no influence on the flow of liquid, which is effected with excellent regularity. The idea, and the method of construction, of the coverlet may be supposed to have been derived from Mr. J. K. Thornton's refrigerating cap for the head.

The corner-stone of a new infirmary was laid at Bolton on Saturday last. The new building will consist of four distinct blocks—the administrative block (which is in the centre), right and left pavilions, and the children's hospital, which is at the back of the left pavilion. The number of beds to be provided will be—in the men's wards, 42; occasional wards, 17; children's hospital, 16—total, 75. The sum of £32,600 has up to the present time been paid or promised towards the erection and endowment of the new infirmary.

Several additional cases of typhoid fever having occurred in the fashionable suburbs of Bristol, the medical officer of health for the district, in his report to the sanitary authorities, recommends a further issue of circulars cautioning the public with reference to the use of contaminated milk, and recommending that that article of food should always be boiled before being used.

Earl Fortescue has accepted the presidency of the Sanitary Congress to be held in Exeter in the coming autumn; and the local arrangements, under the direction of the Mayor and Corporation of that town, promise to be most complete.

THE METROPOLITAN WATER-SUPPLY FOR MARCH LAST.

The report of the Metropolitan Water Examiners for the month of March last records a slight improvement in the quality of the supplies. The state of the water in the Thames at the intakes of the different companies was good from the 1st to the 3rd of the month, when it became very bad, and remained in a bad condition until the 13th; it then improved in quality, and continued in a good state for the remainder of the month. The water in the river Lea was generally good during the month. These remarks refer to the condition of the water previous to filtration. The water at all the intakes was in a better condition during the month of March than in February; the filtration was efficient, the water supplied by all the metropolitan water companies having been clear, bright, and properly filtered. Dr. Frankland reports that the Thames water supplied by the Chelsea, West Middlesex, Southwark, Grand Junction, and Lambeth Companies was of somewhat better quality than in February, but the Southwark Company's water was still unfit for dietetic purposes, being much polluted with organic matter. The best water from the Thames was sent out by the West Middlesex Company, but the great improvement in this Company's water noticed since the renewal of their filters in November last has nearly disappeared, and this water is now only slightly better than that of the Chelsea and Grand Junction Companies. The Lea water delivered by the New River Company was of much better quality than any of the Thames waters; but that distributed by the East London Company was inferior to three out of the five Thames waters. The deep-well water supplied by the Kent and Colne Valley Companies, and by the Tottenham Local Board of Health was of its usual excellent quality for dietetic purposes; and that sent out by the Colne Valley Company was suitable for all domestic purposes, having been softened before delivery.

A CASE OF HYDROPHOBIA AT THE LONDON HOSPITAL.

A case of hydrophobia was admitted into the London Hospital last week, under the care of Dr. Langdon Down. The patient, a young man, had been bitten slightly on one hand by a pet dog about two months previously. The man himself did not know, we believe, that his dog had died of rabies, and he certainly had no fear, and not even any suspicion, as to the character of his own malady. The disease ran a very rapid course, and was characterised by an unusual amount and degree of excitement and of intellectual disturbance. No treatment was of any avail, and death ensued on the second or third day after admission. Curare was not tried, we understand, the drug not being available in time. Nitrite of amyl was used, and quieted and soothed the patient so far as to enable him to take large and repeated doses of chloral. The case will no doubt be published in full detail.

THE METROPOLITAN ASYLUMS BOARD.

At the usual meeting of the Metropolitan Asylums Board held on Saturday last, the annual report of Dr. P. H. McKellar, the Medical Superintendent of Stockwell Fever Asylum, was presented, showing that in the year 1879, 1001 patients had been admitted, of whom 167 had died—15 within twenty-four hours of admission. Of those admitted as fever patients on the usual medical certificate, 43 could not, in his opinion, be described as suffering from either typhus, enteric, or scarlet fever. Dr. H. Bernard's report of the Stockwell Small-pox Hospital, which was also presented, showed that from May to November, 1879, 146 patients had been admitted, 130 of whom were suffering from small-pox. Of the 146 no fewer than 111 had been vaccinated; of the vaccinated only 3 died, giving a mortality of 2·7. He was doubtful about the vaccination of 4, and of these 2 died. There were 31 unvaccinated; of these 12 died—a percentage mortality of 38·7. The largest number of patients admitted to this Hospital in any one year was 2288 in 1871, and 1574 in 1877. Dr. Bernard referred to the low mortality as being in some measure, at least, due to the improved sanitary condition of the Hospital, and he advocated the cleansing of the Hospital after full work every second, or at most every third, year. Dr. Collie's annual report on the Homerton Fever Hospital showed that 937 patients had been admitted during 1879 of whom 139 had died; the mortality was thus about 15 per cent. The report for the similar period from Dr. Gayton

on the Homerton Small-pox Asylum, stated that only 69 cases of that disease had been treated in the Asylum during the year, the Asylum, during the fever epidemic, having been cleansed and used as a fever asylum for enteric cases. The percentages of mortality were—vaccinated, 9·8; doubtful, 66·6; unvaccinated, 53·3 per cent. The current reports from the fever asylums showed that Stockwell had, on the 30th ult., 97 cases, Deptford 74, and Homerton 104; total, 275, as against 276 in the previous fortnight. In the small-pox asylums the total was 183, as against 181 a fortnight ago.

THE CORONERSHIP FOR WEST KENT.

The freeholders of West Kent have elected to the office of coroner Mr. E. A. Carttar, son of the late coroner. The late Mr. Carttar, who held the office for many years, was a very popular man, and to this popularity his son is, we imagine, chiefly indebted for his election. He is a young man, and is, we think, neither a solicitor nor a medical man; but he has been, no doubt, well trained, both as a lawyer and a coroner, by his father. Dr. Maxwell polled 541 votes against the 698 given to Mr. Carttar.

ROYAL COLLEGE OF PHYSICIANS, LONDON.

At the ordinary Comitia of the Royal College of Physicians held on Thursday, April 29, the following Members of the College were elected to the fellowship:—John Topham, M.D. Lond., Collingham-road; Cornelius Benjamin Fox, M.D. Edin., Chelmsford; Thomas Claye Shawe, M.D. Lond., Banstead Asylum; Charles Kelly, M.D. Lond., Worthing; Robert King, M.B. Camb., Harley-street; Edward Harriman Dickinson, M.D. Edin., Liverpool; Horatio Bryan Donkin, M.B. Oxon., Upper Berkeley-street; Thomas Barlow, M.D. Lond., Montague-street; Frederick Henry Horatio Akbar Mahomed, M.D. Brus., St. Thomas's-street; James Fredk. Goodhart, M.D. Aberd., Weymouth-street; and Sidney Coupland, M.D. Lond., Nottingham-place. The use of the College was granted for the meetings of the General Committee for Organising the International Medical Congress of 1881. And it was referred to the Council of the College to consider what alterations, if any, are required in the by-laws and regulations of the College in consequence of the new regulations for the licence; the Council to report to the College thereon, and to state their opinion as to the mode of carrying those regulations into effect.

THE CASE OF HYPERPYREXIA AT THE ADELAIDE HOSPITAL, DUBLIN.

The patient, to whose case we have referred in our last two numbers, remains in much the same state. Her axillary temperature reached 127° Fahr. on two occasions. All the symptoms point to concussion of the upper portion of the spinal cord as being the primary and essential lesion in the case.

THE MEDICAL SOCIETY OF LONDON.

The session 1879-80 of the Medical Society of London was brought to a close on Monday last, when, as usual, the annual *conversazione* was held in the rooms of the Society, and the annual oration was delivered. The orator on this occasion was Dr. W. H. Broadbent, who gave an interesting and instructive address on "The Pulse and some of its Indications." The address will no doubt be published in full, but it may be noted here that Dr. Broadbent pointed out that in feeling the pulse the practitioner must attend to more than its frequency and strength; and he dwelt especially on the importance to be attached to observation of the resistance in the small arteries. Small resistance marks a pulse of low tension; great resistance one of high tension. It might be said generally that a pulse of low tension is found in nervous affections, and one of high tension in diseases of the kidneys, in gout, and in functional derangements of the liver. The early recognition of high tension was of great importance, as its continuance was productive of, or highly favourable to, very grave degradations of nutrition, resulting in degeneration of the bloodvessels, heart disease, and very commonly apoplexy and other dangers, which might be averted by prompt attention and action at an early stage. The chair was occupied by Mr. Gant, the President of the Society, and there was a large attendance of the Fellows of the Society and other members of the profession. The *conversazione*, brightened by music, followed the delivery of the oration, which, we should add, was warmly applauded.

PROFESSOR LISTER AT THE BRISTOL MEDICAL SCHOOL.

On Monday, May 3, the annual distribution of prizes at the Bristol Medical School took place under the presidency of Professor Lister. In the annual report of the Faculty, the most important event recorded was the erection of new buildings for the School in Tyndall's Park. A new Lectureship of Hygiene and Public Health was established, to which Dr. David Davies, Medical Officer of Health for the city, had been appointed. Mr. W. H. Harsant, F.R.C.S., Assistant-Surgeon to the Royal Infirmary, had been appointed Demonstrator of Anatomy. After distributing the prizes, Professor Lister delivered an impressive and eloquent address to the students. In the afternoon he gave an antiseptic demonstration at the Royal Infirmary to over two hundred medical men of the city and neighbourhood. He chose for demonstration a case of deep cervical abscess, and gave a most lucid and impressive exposition of the leading principles of antiseptic surgery. He was very heartily received by his large audience, and an enthusiastic vote of thanks was accorded him at the end of his address. At the Infirmary, where his system is followed by all the surgeons, he was shown the most interesting cases of recent operation. Next morning he gave another demonstration, in the General Hospital, to a large and appreciative audience.

THE BIRMINGHAM GENERAL HOSPITAL.

The one hundredth annual report of the General Hospital, Birmingham, for the year 1879, shows that, in common with most others in nearly every part of the kingdom, this institution has suffered from the general depression in trade, since it is stated that both the ordinary and extraordinary income of the year are below the average of the three preceding years. Notwithstanding this, the number of in-patients received during 1879 exceeded that of the previous year by 143, and during the greater part of the year the demands for admission were so great that the accommodation was not sufficient to meet them. On the other hand, the number of out-patients was diminished by 1736. This decrease has been principally in minor accidents and urgent cases, and may be partially accounted for by the shorter hours that workpeople have been employed, and the consequently reduced liability to accident. The establishment of provident dispensaries and the absence of serious epidemics may also possibly have contributed to this result.

CHARGE OF LIBEL.

At Bow-street Police-office, on the 1st inst., before Mr. Flowers, Mr. George Hoggan, M.B., was charged with publishing divers libels of and concerning the Board of Management and the Secretary of St. John's Hospital for Diseases of the Skin. Mr. Montagu Williams, for the prosecution, stated that the defendant had been one of the

Physicians to the Hospital, but had left it on account of some dispute with the management, and had since then published in the *Standard* at the beginning of March last, and in the *Medical Press and Circular* at the end of the same month, letters reflecting on the management of the Hospital in terms that the learned counsel regarded as libellous. It was stated also that the Secretary of the Hospital had received numerous letters inquiring whether he was going to take steps to refute the allegations made in the letters, and that he had, therefore, no other course open than to prosecute the defendant. The letters spoken of were put in, read, and proved. A charge of libel was also preferred against Mr. Tindall, the publisher and responsible manager of the *Medical Press and Circular*, on account of the nature of a leading article in that paper in connexion with the letter before mentioned. Both defendants were committed for trial, their own recognisances in the sum of £20 being accepted for their appearance. The magistrate expressed a decided opinion that the leading article did not go beyond fair comment; and that the charge could only be sustained because of the publication of the letter in the journal.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

At a meeting of the College held on Tuesday, May 4, the following were appointed members of the *Court of Examiners* for the ensuing year: Messrs. B. W. Richardson, E. A. Stoker, E. O. Grady, B. G. MacDowel, H. G. Croly, W. Thomson, R. S. Swan, and W. Fraser. *Examiners in Midwifery:* Drs. H. Croly, W. J. Smyly, and J. J. Cranny. *Examiners in General Education:* Messrs. F. James Davys, Michael J. Malone, and Robert Morton.

THE OUTBREAK OF SCARLET FEVER AT THE BARKINGSIDE HOME FOR DESTITUTE GIRLS.

In consequence of an extensive outbreak of scarlet fever at the Village Home for Destitute Girls at Barkingside, in Essex, in December and January last, Dr. Thorne Thorne was instructed by the Local Government Board to proceed to the spot to make inquiries. The Village Home consists of thirty neatly constructed villa cottages, so arranged as to form an extensive oblong, and occupying an estate of nine acres, with a Governor's house and other buildings. Each cottage is constructed to contain twenty girls and a mother-superintendent; and the children's bedrooms, each of which accommodates five girls, have a floor-space of 124 feet, with 1000 cubic feet of air-space. These, in common with every portion of the cottages, are well ventilated, and everywhere the most scrupulous cleanliness was observed. In a semi-detached outbuilding are an ordinary water-closet and a trough water-closet. The latter is for the use of the children, and is regularly emptied, cleansed, and refilled with water twice a day. A box for house-refuse stands in the separate plot of ground belonging to each cottage, and this also is regularly and frequently emptied. The estate has its own means of drainage, with a depositing tank and filter-beds. The house-drains are carefully constructed, and nowhere is there any direct communication between them and the interior of the cottages. An artesian well on the estate supplies every cottage with a constant high-pressure water service. It will thus be seen that the sanitary arrangements of the estate leave little to be desired. The first recognised case of scarlet fever occurred in a child who sickened on December 28, 1879, and on the 31st a second fell ill. Four more attacks took place between the 1st and 13th of January of this year; and on the 14th seven children sickened. These thirteen cases occurred in ten different cottages situated in various parts of the estate, and the incidence of the disease upon these special children, or these special cottages, could not be accounted for by anything they had in common, to the exclusion of the others. After this date the disease spread with great rapidity to the inmates of the other cottages, the largest number of fresh cases on any one day being twenty-three on January 26, and the total number in all, to the end of the epidemic in February, being 159 out of about 440 residents on the estate. Dr. Thorne at once ascertained that neither the milk-supply nor any other article of diet could be held responsible for the outbreak, whilst the laundry was equally beyond suspicion. Further inquiry, however, elicited the fact that the two young children of the Governor had been taken ill on December 11 and 14 with what was undoubtedly scarlet fever, although the attacks were so slight that neither of the children was kept in bed, and no medical treatment seemed to be called for; they mixed freely with the inmates of the different cottages, particularly during the whole period of desquamation. The source of infection was at once revealed. Moreover, the elder of the two had been constantly with the lady storekeeper when she was opening parcels of clothing sent to the Home from various parts of the kingdom; and Dr. Thorne expresses his opinion that during this process the child came into contact with some infected articles. The lady storekeeper herself, after ailing for two or three days, left the Home on December 24, and was subsequently ascertained to be suffering from scarlet fever. The most remarkable feature of the epidemic was its exceptional mildness, not a single fatal case having occurred. The disease having been spread throughout the Home in the manner described, it became impossible to ascertain with certainty the length of the incubative period in any case; and it was therefore impossible to note whether the duration of this period had, or had not, been related to the severity of the symptoms. Too little is known, Dr. Thorne adds, of the causes affecting the severity or the mildness of the attacks from the disease under consideration, to enable him to assign to the circumstance of the excellent sanitary arrangements of the Home the singular immunity from serious and fatal attacks which characterised this epidemic, but he thinks that they certainly deserve to be recorded in connexion with the subject.

THE SPIRILLI OF RELAPSING FEVER.

Dr. Paul Guttmann (*Verhandlungen der Physiol. Gesellschaft zu Berlin*, No. 7, 1880) has examined the blood of more than two hundred relapsing-fever patients treated in the Berlin Barrack Hospital, and has never succeeded in detecting the characteristic spirilli of Obermaier except during the pyretic period. In one case he found spirilli motionless in the blood of a corpse thirty-six hours after death; in another they were still alive thirty hours after the patient's death. What becomes of the spirilli in the intervals between the relapses is still a mystery. Dr. Guttmann rejects Arndt's supposition that these bodies are not parasites, but processes emitted from the red blood-corpuscles owing to the high fever. At present, however, all his attempts to cultivate the spirilli outside the human body have failed. The blood of relapsing-fever patients also contains a number of very minute moving corpuscles, which are rather more numerous during the febrile periods than in the interval. They are not, however, peculiar to relapsing fever, but occur in many other acute diseases, and, more sparingly, even in healthy human blood. They can be cultivated in Pasteur's fluid, and appear to be certainly micro-organisms derived from the atmosphere.

THE LIVERPOOL MERCHANT SAILORS' DISPENSARY.

It will be remembered that some three years ago the Liverpool Sailors' Home Society added to their undertaking a dispensary for merchant seamen, which, under the effective

management of Mr. F. W. Lowndes, and Mr. Armand Bernard, has done much good service. At the recent annual meeting of the governors and members of the Sailors' Homes, these gentlemen submitted their third annual report, which testifies to the continued usefulness of the dispensary. During the year 1879, 853 patients applied for treatment, whilst the total number of attendances reached 2823. The number of cases of severe forms of disease applying for relief induce the medical officers to call the attention of the Committee to the desirability of instituting a system of medical inspection of seamen prior to the sailing of vessels, and they express an opinion that the number of men proceeding to sea uncured must be prejudicial, not only to the health of the crew in general, but probably also to the safety of the ship. They also advocate an application to the local authorities with a view of abating the mischievous practices of quacks who still continue to distribute their handbills amongst merchant seamen with pernicious effects, and they state that many of the victims applying at the dispensary for relief, after having been preyed upon by these impostors, have stated that they were under the impression that they were being treated by properly qualified practitioners.

THE CHIAN TURPENTINE TREATMENT OF CANCER.

In the cancer wards of the Middlesex Hospital the Chian turpentine treatment is now having a full trial in uterine as well as in other cases of malignant disease. The results as yet have not been of a striking character, but particulars will no doubt soon be forthcoming as to the value of the new therapeutic agent, which we may hope has been obtained in a perfectly pure state. The cancer wards of the Middlesex Hospital are specially endowed, it must be remembered, for practically testing the value of any alleged specific for malignant disease.

THE ROYAL EDINBURGH HOSPITAL FOR SICK CHILDREN.

At the twenty-first annual general meeting of contributors to the Royal Edinburgh Hospital for Sick Children, held at Edinburgh on February 12 last, the report for the year 1879 was presented and approved. It stated that the operations of the Hospital during the period to which it referred had been on the whole satisfactory, the number of patients treated having again been in excess of those seeking relief during the previous year. The increase would have been much larger but for the fact that the number of patients treated at their own homes (270) only represents those treated during six months instead of twelve. It has been found that the system of visiting patients at their own homes does not work satisfactorily. Representations have been made to the Committee that it interfered unfairly with private practitioners, as many persons took advantage of it, who were not in need of gratuitous advice, for their children; it thus acted adversely to the purpose of the Hospital, which is to provide medical advice and assistance to the necessitous poor, and also prevented many children being brought into the Hospital who ought to be there. The directors have therefore considered it their duty to dispense with this branch of the work, but the effect of this during the last six months of the past year does not appear to have detracted in any way from the general usefulness of the institution or the extent of its work. The report adds, that while the financial position of the Hospital is not discouraging, the liberality of contributors is not advancing in the same ratio as the claims upon the institution, and although the expenditure is less than last year, it still considerably exceeds the total income of the period. Some changes have taken place during the year in the medical staff, through the retirement of Drs. Ritchie and Linton: their places have been filled by Dr. Underhill, one of the extra-physicians, and Dr. J. Blair Cunynghame; while Dr. Underhill's post as extra-physician has been supplied by the appointment of Dr. J. Playfair.

UNIVERSITY OF GLASGOW.

At the formal closing of the winter session of the University of Glasgow, on April 30, the degree of LL.D. was conferred, *honoris causâ*, on Mr. John B. Cowen, M.D., Emeritus Professor of Materia Medica, University of Glasgow, and on Mr. Michael Foster, M.D., F.R.S., Prelector on Physiology, Trinity College, Cambridge.

FROM ABROAD.

Prof. Parrot on the Effects of Cold.

The following is a translation of a lecture "Du Coup de Froid," delivered by Prof. Parrot at the Hospice des Enfants Assistés during the late cold weather, and published in the *Progrès Médical*, March 13:—

"The rigorous temperature to which the population of Paris has been exposed for several months induces me to occupy your attention for a short time with its injurious influence. But I shall regard this etiological question only in a restricted point of view, having here only to do with subjects in early life. Nevertheless, I may be allowed to add that others may, in more than one circumstance, derive some profit from the counsel which I shall give concerning children. When, after an attentive examination of the patient to whom you are called, you declare that his affection is the result of exposure to a draught (*coup de froid*), or, what would perhaps be more exact, of a chill, the etiology will not always be accepted without discussion. 'How can this be so?' the mother will say; 'before sending the child out he was warmly clad, and when he was taken in a carriage all the windows were closed.' On other occasions, it is affirmed that the child has not been out of doors for several days, and even that he has been kept in a well warmed room. Never let yourselves be disturbed by such arguments as these, but recall to mind what I am now going to say to you.

"A child not yet six or seven years of age cannot bear without mischief too long a walk with a low temperature. He soon tires, and then becomes very sensitive to the action of the cold, which strikes him the instant he stops, or when he suddenly passes from a sheltered spot along a street swept by a current of air. Within doors, the causes of chills are still more difficult to avoid, and the accidents which result from them are more frequent. In the best secured rooms, currents of air are still inevitably produced, these being more intense when their fires are more ardent. If a room be explored in which a fire is kindled, it will be found to be traversed by waves of air which converge from various orifices towards the fireplace. The directions of these currents is very variable, but they are oftenest met with in the lower portions of the apartment, owing to the apertures which exist between the doors and the floor. These are the most to be feared for little children, who delight in passing a part of the day on the ground. If chills are to be feared within doors, when the child never goes out, they are still more to be dreaded when he returns from a walk, during which he has run, played, and over-excited himself in a thousand ways. Scarcely has he arrived, when he is deprived of the warm garments with which he had been covered on going out, and under which a certain amount of moisture of the skin is often produced. If he then remains in a well-warmed room in which he has every facility for moving and playing about, no inconvenience need result; but he more often passes the rest of the day in a half-warmed room in a state of immobility caused by fatigue or by the lessons he has to learn. His temperature necessarily falls rapidly, opening the way to mischief. Things happen in this way not only with children who are able to walk, and up to eight or ten years of age, but also with those who are still at the breast. Before they are carried out they are covered with robes, gaiters, and veils, and finally wrapped up in a pelisse which itself alone would serve to preserve them from the most

rigorous cold. They remain in this way for two or three hours in the arms of their nurse, who moreover imparts to them her personal warmth. Thus, their face is almost always reddened, and they are often bathed in moisture. No sooner have they returned home than they are laid, still sleeping, in their cradle, not without first removing their out-of-doors garments. A rapid aud notable depression of temperature is the result, the effects of which are sometimes very promptly manifested.

"Such, then, are the chief circumstances under which children are exposed to undergo the effects of a *coup de froid*. Let us now consider how the mischievous influence which this cause exercises on their economy is revealed, and the principal affections that are thus engendered. Sometimes the mischief exhibits itself speedily, and then it is, at all events in appearance, of great intensity; but at other times it appears much later, and with much less disturbance. A child between two and six years of age, after having been out, has its meals, and falls asleep without any indicatiou having been given that it had become chilled during its walk. Towards eleven at night it wakes up suddenly, a prey to great agitation mixed with anxiety, coughing noisily as if it had the croup. Its face is animated, its neck swollen, the skin hot and covered with sweat, and the pulse rapid. In a word, it exhibits the combination of symptoms characteristic of stridulous laryngitis. There can be no doubt that the child during the day has been subjected to a *coup de froid*. Another child, still at the breast, on the evening of the day on which it had gone out, after a peaceful sleep, suddenly awakes in a state of distress, of which its altered facies bears witness. It is pale, its eyes are hollow, and it seems about to fall into a state of syncope. Its mouth is opened every instant, as in nausea, every attitude is intolerable to it, and it never ceases moauing. At last it vomits abundantly, seems relieved, and goes to sleep again, and frequently all is terminated by some diarrhœa stools; but at other times the face is reddened, the skin becomes very hot, the pulse is frequent, cough appears, and, after a variable period, all the signs of a broncho-pulmonary affection appear. Here, again, the intervention of a *coup de froid* cannot be doubtful. In other cases, things take place more slowly and with less excitement. It may be only next day that the first symptoms appear. These are variable, fever being the most constant. Attention may be first aroused by loss of appetite or by cough. But the localisation of the disease soon becomes apparent. In some there may be a herpetic or pultaceous angina, while in others there are all the signs of a catarrh, the Eustachian tube and middle ear often then becoming inflamed, and sometimes followed by abscess. In other subjects it is the intestiual canal that becomes affected, as shown by colics and diarrhœa. These are far from being the only pathological consequences of a *coup de froid*, but there are none of more frequent occurrence. They may appear either isolated, or associated in various proportions; and as they play so considerable a part in the pathology of infancy, they must always be borne in mind, and no means of exploration capable of leading to their discovery should ever be neglected. For example, after having made the preliminary inquiry as to how the little patient had passed its time during the forty-eight hours preceding the onset of the affection, auscultation should never be omitted. And I cannot too much insist upon the necessity of examining the throat, and that even when, from the replies of the child or of its relatives, such exploration should seem unnecessary. In how many instances will the solution of the enigma be found there!

"Having considered the dangers to which a *coup de froid* may give rise, it only remains to indicate the most efficacious means of obviating its attacks. If children iuhabit a closed room they should be prevented continuing near, and especially nestling around, the doors, windows, or chimney. They should be put for their games or their lessons in a part of the room as far from the fireplace as possible, provided this is not opposite any aperture. But wherever it can be done this room should be kept in open communication with an adjoining one to which the children should have free access. They would be exposed, it is true, to changes of temperature, but so frequently, and in so insensible a manner, that no harm would result; and in this way they can even become accustomed to bear the greater and more sudden thermic transitions to which they may be exposed under other circumstances. With respect to taking children out, they cannot all be subjected to the same rules, age being required to be taken into great consideration. Whatever the temperature may be, providing neither rain, snow, nor mud place any obstacle to their walking, children can and ought to be sent out every day; but the duration of their walk should be in an inverse proportion to their age and to the intensity of the cold. The lower the thermometer, and the younger the child, the shorter should be the time it is exposed to the action of the external air. When the temperature is three or four degrees below freezing point, a child who is not more than five years of age should not remain out of doors more than twenty minutes or half an hour; and although one of seven or eight may be allowed to be out for nearly an hour, it is only on the condition that it is kept constantly walking. Infants at the breast, when more than three months old, may be carried out even in rigorous weather, but great care must be taken to keep the face covered and to abridge the walk. You cannot too much insist upon this daily walk, to which even the existence of a slight cold should not offer an obstacle. It is, in fact, very hurtful for children to remain several days in succession without being subjected to the action of the atmospheric air; and it is very frequently after their first going out, succeeding to a prolonged seclusion, that the effects of chill are observed. On their return from their walk, precautions of another kind, and not less essential, should be taken. Nothing can be more imprudent than to unclothe, as is usually done, a child on returning home after a walk, and that even when the temperature of the room is much higher than out of doors. It is very rare indeed for the skin not to be in a moist condition; and the child, somewhat fatigued from the exercise, now remains in a state of comparative quietude. This absence of action after an active walk cannot always be compensated for by the warmth of a fire. We should recommend, then, that the garments which were put on the child on going out should be only removed gradually, and the more slowly as the difference between the external temperature and that of the room is slight, and the state of rest is more complete. When the child returns from its walk is the time to give it its lunch, and it is a good hygienic practice at the end of this slight repast to give a little generous wine, and that even in the case of very young children. In spring and summer, when it is much hotter out of doors than within, we should not hesitate to cover children when they return from their walk.

"What should be done in those instances—very rare indeed—in which we are promptly informed that a child has been subjected to a *coup de froid?* Of course we have here in view the general treatment of the chill, considered independently of any localisation. The child should be put to bed in a room having a temperature of not more than 61° or 62° Fahr. Hot cloths should be applied to his lower extremities, or sinapisms may be resorted to. A warm aromatic infusion should be given him to drink after having added to it a little brandy or rum; and we need have no fear, even when a child is not more than five or six months old, of giving a teaspoonful or two of brandy in the course of one or hours. To older subjects, especially when they have passed the second year, some acetate of ammonia may be given; and when there is urgent nausea or oppression we should not hesitate to administer an emetic. This induces diaphoresis, which is always salutary, and a calm sleep, from which the child will only arouse at its usual hour of waking—thenceforward free from all danger."

Persistent Hiccup.—At the St. Petersburg Medical Society, Dr. Barthel mentioned a case of hiccup, occurring in a hysterical girl twenty-two years of age. The attack lasted for thirty-six hours, the singultus occurring from ninety to one hundred times in the hour. Valerian and the bromide were of no avail, and chloroform succeeded only as long as the narcosis lasted. Morphia hypodermic injections were useful only for a short time, injections of distilled water proving of more use. No disturbance of the functions of the female economy existed. Dr. Anders in a similar case had found the application of the constant stream of electricity highly useful; while Dr. Hinze had never derived any advantage from the use of this in hiccup. In a case which he had seen the hiccup always occurred as long as the patient was silent, but disappeared when she was speaking. Dr. V. Mayer had quickly succeeded in a case by a hypodermic injection of one-fortieth of a grain of atropia.—*St. Petersburg. Med. Woch.*

GENERAL CORRESPONDENCE.

INDIAN MEDICAL SERVICE.

[To the Editor of the Medical Times and Gazette.]

SIR,—In your article on the above subject, in your issue of the 24th ult., you take a very favourable view of the prospects of the Indian Service, which, I regret to say, is not shared by the members of it, if I may judge from various letters I have had from India on the subject. The Bengal Medical Staff, so far as the local service is concerned, will in future consist of a Surgeon-General and four other administrative officers in the Civil Department, and there will be five Deputy Surgeons-General for military duty. Thus there will be a Surgeon-General and other nine administrative officers under him, as against the former number of one Surgeon-General and eleven Deputies. In Madras there will be a Civil Surgeon-General and four Deputies for military duty, being a reduction of two on the former establishment. In Bombay there will also be a Civil Surgeon-General and two Deputies for military duty, or a reduction of two on the late permanent establishment. You are, I observe, taken with the provisions of the sixth paragraph of General Order No. 150, of March 15, granting the rank and privileges of Deputy Surgeons-General to Sanitary Commissioners after twenty-six years' service. When all Sanitary Commissioners have completed twenty-six years' service we should have one Deputy Surgeon-General in excess of the hitherto permanent establishment in Bengal, and one less in the other two Presidencies. But this is no real boon to the Service in general; on the contrary, it is an injustice. Why should Sanitary Commissioners be singled out for this concession? and why should not the rule equally apply to Principals of the Medical Colleges, Professors, Inspectors-General of Gaols, or Civil Surgeons of the larger stations? It cannot be maintained that officers holding these appointments are, as a general rule, in any degree inferior in professional ability to the former.

You further draw attention to the fact that in future selections will be made from the whole Indian Service in the Presidency as hitherto followed. The last two selections do not speak well for the mode of procedure, which no doubt will be followed in making civil administrative appointments, as they set aside all former usage and precedent. In the first instance, Surgeon-Major J. A. Payne, who had refused promotion years ago, for his own benefit, was allowed to take it last year and to hold executive appointments at the same time—both being opposed to the rules of the Service as hitherto in force. In the next case, a Sanitary Commissioner is pitchforked from the rank of Surgeon-Major into that of Surgeon-General, he too having years ago refused promotion; and he thus leaps over the heads of Deputy Surgeons-General of acknowledged ability, such as Christison, De Renzy, Townsend, and S. W. Beatson, besides others who might be mentioned. No one in the Service believes that he was fitter for the appointment than any of the men I have mentioned, and the grievance of his promotion touches most keenly Deputy Surgeons-General Hutchinson, Christison, Adley, and De Renzy, who entered the Service before him. Hitherto, if a medical officer did his duty faithfully, and was competent for promotion, he could fairly calculate on obtaining it in about twenty-six years or thereabouts. But now all certainty has departed, and in a few years will be seen the effect of the recent orders, in men having to retire on superannuation without having had a chance of promotion.

Take an example in point. A Surgeon-Major (Bengal) entered the Service at twenty-seven years of age in 1853. For the past year he has officiated as Deputy Surgeon-General in the military department at Rawul Pindee, where very onerous duties devolved on him at this advanced post in connexion with the Afghan war. These duties were most ably performed, and obtained favourable recognition from his superiors. He ought to have received his promotion on the retirement of Dr. Irving in December last, but, under the present rules of *selection*, Dr. Payne, who, under the rules as hitherto interpreted, was ineligible from having refused promotion, stepped in before him, and in March the Surgeon-Major would be compelled to retire from the Service on a small pension on attaining the age of fifty-five years, which, had he been promoted, would not have been necessary. Such cases will be common enough before long, and as this state of matters has resulted from the action of the Government in altering the conditions of the Indian Service, it behoves the Government to provide a remedy.

You say that the Indian Service will lose only two Deputy Surgeons-General, the same as the Army Medical Department. I trust I have been able to show that the former actually suffers a greater loss;] and I would further add that it is guaranteed against such loss by Act of Parliament, which the other Service is not. I would say, in conclusion, that, till matters mend, I shall strongly advise all young men against entering the Indian Medical Service.

May 1. I am, &c., I. M. S.

SUPERANNUATION ALLOWANCES OF POOR-LAW MEDICAL OFFICERS.

LETTER FROM DR. J. ROGERS.

[To the Editor of the Medical Times and Gazette.]

SIR,—At a meeting of the Council of the Poor-law Medical Officers' Association, held at their rooms, 3, Bolt-court, Fleet-street, last evening, it was decided to seek an interview, as early as may be practicable, with Mr. Dodson, the newly appointed President of the Local Government Board, for the purpose of impressing on him the expediency of so amending the Poor-law Medical Officers' Superannuation Act as to secure that, in all proper cases, superannuation allowance shall be granted by local boards subject to the initiation of the Local Government Board. The Council already possesses information as to several cases of special hardship where superannuation has not been granted, but, with the view to making their case as complete as possible, they would feel obliged if Poor-law medical officers would supply any instances that have come to their knowledge where superannuation allowance has been refused. To make such information really useful, it will be necessary that the name of the ex-medical officer of the union, the time during which he held office, his age, and the grounds (if any) given for refusal of superannuation, should be supplied.

As I am engaged in drawing up a memorial, which we propose to present to the President, I shall be much obliged if gentlemen will forthwith send any such information to me. I am, &c., JOSEPH ROGERS,

33, Soho-square, May 5. Chairman of Council.

QUACK ADVERTISEMENTS AND THEIR RESULTS.

[To the Editor of the Medical Times and Gazette.]

SIR,—There is a young man at present in the wards of Middlesex Hospital whose case deserves to be made known as widely as possible. He is suffering from epithelial cancer of the lip, which commenced about ten months ago. He was then induced to try Holloway's ointment, on the faith of the advertisements and testimonials he had read. The result is that when, a few days ago, he came to the Hospital, for the first time seeking medical aid, the cancer was found to involve a large part of the upper lip and cheek, and secondarily the glands of the neck, which were enormously enlarged and ulcerated. The patient's condition is now such as not to admit of operation, and the course of the disease will probably be to an unnecessary and painful death. The cause of this is the licence that allows a quack medicine—"protected by letters patent"—to be freely advertised as an efficient remedy for every kind of disease. Most medical men in active practice have experience of similar lamentable cases. Should the Government not take some steps to have quack advertisements supervised? Their sting lies in their self-asserted claims to universal healing powers. It would not be an unwarranted interference with the liberty of the subject if those men, who make large fortunes at the expense of the lives of many of their fellow-creatures, were prohibited from exhibiting advertisements which had not passed through the hands of a public inspector. We have a censor of public plays, for the protection of the morals of the community: it is high time we had a censor of quack advertisements, for the protection of public health.

I am, &c., AN INDIGNANT WATCHER.

REPORTS OF SOCIETIES.

THE PATHOLOGICAL SOCIETY.

TUESDAY, APRIL 20.

JONATHAN HUTCHINSON, F.R.C.S., President, in the Chair.

ON SOME APPEARANCES, PROBABLY OF PARASITES, IN THE VOLUNTARY MUSCLES IN ENTERIC FEVER.

DR. GEORGE BUCHANAN read, on behalf of Mr. W. H. Power, of the Local Government Board, an account of certain observations made by the latter on the above subject. Mr. Power had recently discovered many nematoid worms closely resembling trichinæ in the muscles of a boy who had died on board the training-ship *Cornwall*. The boy's symptoms during life were like those of typhoid fever, and many other boys in the ship had been similarly affected. Mr. Power's investigations had led him to the conclusion that the boys had suffered, not from typhoid, but from a disease of a parasitic nature. The parasites then found, although they were of the same size as trichinæ, were more transparent than trichinæ usually are; moreover, none of them were encysted. But he had imagined that these differences from the ordinary appearance of non-encysted trichinæ might have been due to the fact that the disease had run a very rapid course in the case of the boy whose muscles were examined, and to the long period (two months) that had elapsed between his death and the date of examination of the muscles. But these results suggested to Mr. Power the advisability of examining the muscles of persons who had died of undoubted typhoid fever. The first body he had had the opportunity of examining was that of a young man who had died in St. Thomas's Hospital of peritonitis resulting from perforation of the bowel as the result of typical typhoid ulceration. In the substance of the pectoral muscle were found certain bodies, believed to be parasitic worms. The examples first observed exhibited some movements, and seemed to be alive. They were, both in length and in breadth, only about one-fourth the size of an average trichina spiralis. They were thickest in the middle, and had one end rather more slender than the other. They resembled nematoid worms not only in the proportion of their length and breadth, but also in possessing what seemed to be an interior canal, which appeared to be covered at one part by some internal tissue or organ. The muscles of a second body had been examined, with exactly similar results to those just described. This second patient was a boy who had been under the care of Dr. Curnow in Greenwich Hospital, and had died of peritonitis at an early stage of undoubted typhoid fever. But in neither of these cases were all the muscles, or all parts of the same muscle, found to be equally pervaded by these worm-like bodies; in many microscopic specimens not one such body was to be seen. None had been found in the diaphragm in either of the two cases examined. Further microscopic examination revealed the presence, in the muscular tissue, of certain smaller bodies much more numerous than those worm-like bodies already described, and possibly having some relation to the latter. These smaller bodies, however, were distinguished with difficulty from the muscular substance, a slight interference with the slide being often sufficient to make them no longer visible. The larger or worm-like bodies were most numerous in the portions of muscle where decomposition was farthest advanced; this was not true of the smaller bodies.

The PRESIDENT remarked that the facts now submitted to the Society were too novel to admit of useful discussion at this stage. It is understood that Mr. Power is continuing his investigation of the subject.

RAPID DISAPPEARANCE OF MORPHŒA PATCHES.

The PRESIDENT noted, in regard to a living specimen whom he had exhibited a year ago, that the numerous white ivory patches of morphœa then present had now almost entirely disappeared, only a slight stiffness and staining of the skin remaining where the patches had been. Though it was well known that these morphœa patches did disappear spontaneously, the rapidity of recovery in this instance was greater than he had ever observed before.

Mr. M. BAKER referred to a case of the same disease which had come under his observation only a few months ago. At that time there were many large patches to be seen on the thighs, but they had now almost entirely disappeared, and the patient had stated that the disappearance took place very rapidly after the occurrence of profuse hæmorrhage from the bowels.

SKIN DISEASE, PROBABLY LICHEN RUBER.

Mr. BAKER then called attention to a female patient he had brought forward at a former meeting. The woman, who was fifty-three years of age, presented numerous large rough patches, almost warty in appearance, in various parts of the body, but especially on the extensor aspect of the limbs. The patches were deeply pigmented, showed slight desquamation but no weeping, and itched very much. The disease had begun two years and a half ago. The condition was essentially of a papular or tubercular character, the large patches being formed by the confluence of several tubercles. At the elbows there were a few patches not raised, and much more like ordinary lichen ruber. At parts there was the aspect of prurigo, due to the fact that there the tops of the papules had been scratched off. Great difference of opinion had been expressed as to the nature of the case, some calling it eczema, others prurigo, others psoriasis or lichen. The speaker was inclined to regard it as lichen, perhaps of the form to which the President had given the name "lichen psoriasis."

The PRESIDENT remarked that he had suggested the term "lichen psoriasis" for *lichen ruber*, because the latter disease was essentially a form of psoriasis. He thought that many skin diseases would be much simplified by the recognition of the fact that they were polymorphic; the so-called *lichen ruber* or *planus* was merely one of the polymorphic forms of psoriasis. The fact that the same treatment cured these different conditions was another proof that they were merely varieties of the same disease.

Dr. PYE-SMITH would have regarded the case as an example of psoriasis; but, as Mr. Baker had seen it in its earlier stages, he was in the best position to form an opinion regarding its nature. But the distinction as between lichen and psoriasis was certainly of trivial importance, the two conditions being so closely allied. But between prurigo, eczema, and psoriasis or lichen the differences were quite distinct and definite.

RAMIFYING CYST IN THE BRAIN.

Dr. EWART exhibited the brain of a man, aged thirty-one. Within the eighteen months preceding his admission into St. George's Hospital, in July, 1878, he had suffered from three very severe attacks of headache and vomiting, and for a few months before his admission he had shown symptoms of mental derangement. There was again headache with vomiting when he was admitted, and he was found to have also numbness in both hands. Soon afterwards he became violent, and death took place from coma. Post-mortem, the right cerebral hemisphere was found to contain a large cyst. The membranes over the interpeduncular space and on the under surface of each frontal lobe were thickened, the thickening consisting of a thin membrane which was packed closely in a depression on the brain and sent sac-like tubular prolongations into the hemisphere. The cavity containing the cyst was very irregular in shape from projecting bands and columns, apparently produced by branches of the Sylvian artery. The lining membrane of the cavity was quite smooth, and looked like that of the ventricles, with which, however, it had no connexion. The wall of the cyst itself was composed of a very thin membrane, and was quite separate from the lining of the cavity. The cyst-wall was elaborately and irregularly folded on itself, so that within it there was only a potential, and not an actual, cavity. The arrangement of the cerebral arteries was also very abnormal, especially in the case of the two anterior cerebrals and the right middle cerebral. The speaker thought the cyst was probably an example of congenital malformation. It was, therefore, strange that there should have been no symptoms until the patient was twenty-eight years old. When they did arise, they were probably due to increased growth of the cyst, or to some irritation occasioned by its presence. The abnormal arrangement of the cerebral arteries was probably connected with the presence of the cyst.

ANEURISM BY ANASTOMOSIS OF THE EAR.

Mr. F. EVE exhibited specimens and drawings illustrative of this condition, which had been found in a woman aged

twenty-one. At birth there had been a small pulsating tumour in the upper part of the pinna. This had gradually increased in size, and was ligatured six years ago. Two years later a new portion of the growth at the back of the ear was unsuccessfully treated by pins, and when the patient came into hospital the whole pinna above and behind the external auditory meatus was found to be involved, being enlarged, soft, of a dull-red colour, and pulsating moderately. A humming bruit could be heard on auscultation. The right common carotid, and the temporal and posterior auricular arteries were enlarged. The tumour became flaccid upon pressure on the carotid of that side. Hæmorrhage had taken place several times. The whole pinna was removed by Mr. Thomas Smith. The microscope showed a great increase in the number of arterioles and capillaries, their anastomoses forming a very close network. The walls of the arterioles were markedly thin in proportion to the size of the vessels. A number of capillaries could be seen in various stages of the process of formation, branched protoplasmic filaments communicating with the epithelioid cells of the adjacent capillaries. The Malpighian layer of the cuticle was greatly hypertrophied, extending downwards in processes, some of which were branched. The sebaceous glands were also enlarged. These changes he attributed to the increased blood-supply, and thought they were of interest in connexion with the similar changes found around epitheliomatous growths. A congenital nævoid growth had probably been the starting-point of the aneurismal condition he had deseribed.

Laryngeal Perichondritis in Typhoid Fever and in Small-pox.

Mr. Eve also showed three specimens exhibiting perichondritis of the larynx, one from a patient who had had small-pox, the other two from typhoid fever patients. In the small-pox case, dyspnœa came on rather suddenly when the patient was convalescing from the variola. Tracheotomy was performed, but failed to save life. Post-mortem there was found œdema of the glottis and of the ary-epiglottidean folds. Beneath the posterior attachments of the true vocal cords were seen two oval ulcers, leading into cavities containing pus, in which lay the necrosed arytenoid cartilages. The superior and posterior part of the cricoid cartilage was also necrosed. The other two specimens were from the bodies of patients who had died from typhoid fever. One of the patients had had several attacks of intestinal hæmorrhage; the other had had very high temperature. The laryngeal conditions were found to be very similar to those seen in the small-pox case, except that the cricoid cartilage was not necrosed. These laryngeal lesions many authorities regarded as due to extension of the typhoid or variolous ulceration down to the cartilages. Liebermeister considers the lesions to be the result of a diphtheritic inflammation; while Sestier thinks that the occurrence of such abscesses is explained by the general tendency to suppuration and necrosis often manifested by convalescents from typhoid fever. Mr. Eve was inclined to agree with Sestier's explanation.

Dr. Greenfield had often seen such abscesses in typhoid fever cases. He thought they were due to the formation of pus in connexion with disease of the perichondrium, or more externally. The lesion, he thought, occurred during the acute stage of the fever, but often subsided. In many cases there were no symptoms during life pointing to laryngeal mischief. The position of the abscess was very characteristic.

Dr. Goodhart suggested that these cases occurred in epidemics. Thus for years he had not met with an example, and then had seen several within a short period. He thought the abscess started sometimes quite outside the cartilages.

Dr. Douglas Powell asked whether there were any other abscesses of pyæmic or other origin in the bodies of these cases.

Dr. Greenfield had no details of his cases at hand, but in the last case he had seen there was no evidence of any other pyæmic lesion. As a rule he had found the abscesses in patients who had succumbed during the acute period of the typhoid fever with great pyrexia and deep ulceration.

Dr. Taylor saw an instance last year in a patient who had had high fever for six weeks, and died ultimately of perforation and peritonitis. The laryngeal abscess was large. Stenosis of the larynx had been noted by an American physician as sometimes resulting from typhoid fever.

Mr. Eve stated that in none of his cases was there any other abscess or sign of pyæmia.

The President suggested that Drs. Greenfield and Taylor should bring forward their specimens and re-open the discussion on the subject at a future meeting of the Society.

Aortic, Mitral, and Tricuspid Stenosis.

Dr. Pearson Irvine exhibited a heart in which the aortic, mitral, and tricuspid orifices were all constricted. The specimen was the heart of a woman aged thirty-seven, who had been weakly from birth, being never able to run about like other children. Seven years ago she had an attack of acute rheumatism. She had been ailing ever since, and died of dyspnœa and exhaustion. Besides the marked stenosis at the three orifices there was found a large firm clot, completely filling the cavity of the left auricle, with the exception of channels for the blood coming from the pulmonary veins. Dr. Moxon had, he believed, exhibited a similar specimen before the Society a few years ago. It was a question whether the condition was congenital or acquired, or partly the one, partly the other. There was no evidence of there ever having been pericarditis in the case.

Dr. Ewart had exhibited before the Society, about two years ago, a specimen showing both mitral and tricuspid stenosis. In that specimen, too, the left auricle was completely filled by a clot similar to that seen in Dr. Irvine's specimen.

Dr. Irvine, in reply to Dr. Taylor, said the heart acted very irregularly, with a double ventricular systole, so that the physical signs were difficult to make out. There was heard, however, over the lower end of the sternum, a distinctly diastolic murmur, which did not run up to the systole.

Tumour of Spermatic Cord.

Mr. Walsham exhibited this specimen, removed by Mr. Marshall from a boy aged four years. When two years old a truss had been applied for what was supposed to be a congenital hydrocele, but the truss could not be borne. A fluctuating tumour was then observed just outside the external abdominal ring. This disappeared, and another tumour, close to the globus major, began to grow. It increased in size, and was removed. On section it was found to consist of a number of tubular systems of cells. In many particulars it resembled a gumma, but there was no history of syphilis. He thought the growth must have been developed from the remains of the Wolffian body.

Dr. Goodhart remarked that the tumour resembled very much one which Mr. Butlin and he had examined for the Morbid Growths Committee. That specimen had been exhibited by Dr. Gairdner, and was called a lymphoma. In the body from which it had been taken several similar tumours had disappeared spontaneously, and he thought the peculiar tubular structure of the growths might afford an explanation of the disappearance, as the cells could be discharged into the spaces. In Mr. Walsham's case, too, one tumour had spontaneously disappeared.

The following specimen was exhibited by card:—

By Mr. Shattock—Persistent Communication between the Rectum and the Genito-urinary Tract in a new-born male child.

At the conclusion of the meeting Dr. Heneage Gibbes gave a demonstration showing how it is possible to get a stereoscopic effect with the ordinary binocular microscope, with one-twelfth oil immersion, both fields being perfectly illuminated. The dividing epithelium in the skin of the embryo salamander was the subject selected for the demonstration.

ASSOCIATION OF SURGEONS PRACTISING DENTAL SURGERY.

Wednesday, April 21st, 1880.

W. A. N. Cattlin, F.R.C.S., President, in the Chair.

Cystic Disease of the Lower Jaw.

Mr. Christopher Heath showed a patient (a woman), aged forty-four, who had been under his care, for cystic disease of the lower jaw, in University College Hospital in 1875, as bearing upon the case he was about to relate

Mr. Heath then narrated a "thirty-five years' history of a maxillary tumour." The patient, aged sixty-seven, when he first came under his notice in 1877 was a healthy country gentleman, who said that as long as he could remember there had been some enlargement of the right side of the lower jaw. In 1845 this enlargement increased considerably and very rapidly, and, in 1847, Sir W. Fergusson removed a tumour of the right side, sawing through the ramus horizontally, and the body of the jaw close to the right canine tooth. The tumour was apparently of a fibroid character, having a large cyst developed in it. He continued in good health for fifteen years, and then noticed the formation of a cyst in the incisor region, which had frequently been tapped by Sir W. Fergusson. In July, 1877, Mr. Heath found cystic disease of the left side of the body of the jaw, extending to the molar region, and operated by extracting all the teeth, and opening up the cyst freely, and clearing out some solid growth with the gouge. From this the patient made a good recovery with considerable consolidation of the bone; but in the November following one cyst was found to have developed anew in the incisor region, and this was treated in a similar manner. A year later a fresh development of cysts had taken place, and the operation was repeated with a good result, so that in February, 1879, the jaw was completely consolidated, and the patient was advised to have some artificial teeth fitted. In November, 1879, the patient reappeared with a large solid tumour involving the left side of the body of the jaw, which, noticed first in June, had grown rapidly of late, and now involved the skin for an area of a square inch. On December 2, Mr. Heath removed the tumour by sawing through the bone immediately in front of the left masseter, and also removed a piece of infiltrated skin from the left of the median line. The wound was brought together with hare-lip pins and sutures, and only one artery (facial) was ligatured. The patient made an uninterruptedly good recovery, and soon gave up the use of a feeder, and took food with a spoon, and was able to talk intelligibly after the first week, although deprived now of the entire body of the jaw. The lower end of the wound being left open, afforded a thorough drain for discharge, and the mouth was moreover easily kept clean. The parts rapidly contracted, and he was able to leave London the first week in January, 1880. The patient returned early in February, when the skin near the wound was found to be increasingly infiltrated, and a tumour of the size of an orange was found beneath the right deltoid. He had strained the right arm in getting into a hip-bath, but was quite clear that the humerus had not been struck. The tumour was painful, but the bone was sound, the head moving with the shaft. A week later the patient was found to have a tumour in the pelvis pressing upon the rectum, and springing from the interior of the right innominate bone. From this time he gradually lost strength, and died at the end of March. The second tumour was pronounced by Mr. Doran to be a round-celled sarcoma, and the same growth was found in the piece of skin which was removed. The earlier tumour, which had been preserved in King's College Museum, was too much altered by long immersion in spirit to allow of minute examination, but appeared to be a fibroid or a spindle-celled sarcoma. No post-mortem examination of the internal growths could be obtained. Mr. Heath remarked upon the great interest of the case, and its important bearing on the treatment of cystic disease of the lower jaw. Hitherto cystic disease of the lower jaw had been regarded as a local ailment, and the treatment by clearing out the cysts and crushing in their walls had given good results. In this case more than thirty years had elapsed between the formation of the two growths, and in the interval cystic disease had been largely developed. Mr. Heath then alluded to the female patient he had previously shown, who had been under his care for the last five years, and in whom he had twice operated by breaking down the cysts, with good results; but in whom there was now considerable thickening of the jaw, but no distinct tumour. He concluded by contrasting cancerous with sarcomatous tumours, showing that the former invade the lymphatic, and the latter the venous system; and hence the secondary tumours in various parts of the body.

The PRESIDENT said the case just described by Mr. Heath was, he thought, an example of specific disease. There were three distinct cysts, and considerable deposit of solid matter, and its malignant character was shown and proved by metastasis to the pelvis. The patient shown appeared to him to be suffering from disease which was following a similar course. With the exception of dentigerous cysts, the most common form of disease of the lower jaw was a single cyst which expanded the walls and produced absorption. Such growths were generally innocent.

Mr. S. CARTWRIGHT was inclined to think that cystic tumours more often had their origin in the teeth than was generally supposed, the peculiar connexion of the teeth with the jaw favouring this hypothesis. In many cases the cysts were probably congenital, and formed in connexion with the primitive sac of the tooth.

Mr. HAMILTON CARTWRIGHT said that the character of the tumour Mr. Heath had just described was evidently not of the odontomatous or dentigerous kind, although a cyst existed in the sarcous elements of the tumour. He believed that such growths were of dental origin—subacute, not acute, inflammation of the root being the first origin of the evil. As a result, lymph is thrown out around the fang, or even beneath the external periosteum of the maxilla. This lymph, if not absorbed, becomes organised, and a tumour—sarcomatous, osseous, or of the two structures combined—is the result. The moral to be deduced was that dentists should have a good surgical knowledge, and know when it may be more dangerous to save a tooth than to remove it.

Mr. NAPIER brought forward the models of an irregularity in the position of the right upper central incisor in a child aged six years and a half, and asked the opinion of the Fellows respecting the advisability of torsion at so early an age.

Dr. MCOSCAR showed the casts of a case of epulis, which was virtually cured after a few weeks' treatment by electrolysis, although continued occasionally for months. The case has remained as a cure.

The PRESIDENT proposed a special vote of thanks to Mr. Christopher Heath for the very interesting cases he had brought before the Association.

MEDICAL NEWS.

UNIVERSITY OF LONDON.—The following Examiners for 1880-81 were elected at a recent meeting of the Senate:—

Practice of Medicine—W. H. Dickinson, Esq., M.D., and C. Hilton Fagge, Esq., M.D.
Surgery—John Cooper Forster, Esq., M.B., and Professor John Wood, F.R.S.
Anatomy—Professor John Curnow, M.D., and Professor Redfern, M.D.
Physiology—Philip Henry Pye-Smith, Esq., M.D., B.A., and Professor J. Burdon Sanderson, M.D., LL.D., F.R.S.
Obstetric Medicine—J. M. Duncan, Esq., M.D., LL.D., F.R.S.E., and Henry Gervis, Esq., M.D.
Materia Medica and Pharmaceutical Chemistry—Professor E. B. Baxter, M.D., and F. T. Roberts, Esq., M.D., B.Sc.
Forensic Medicine—Professor Ferrier, M.D., M.A., F.R.S., and Thomas Stevenson, Esq., M.D.
Chemistry—Professor Debus, Ph.D., F.R.S., and Professor Dewar, M.A., F.R.S.
Botany and Vegetable Physiology—W. T. Thiselton Dyer, Esq., M.A., B.Sc., and Sydney H. Vines, Esq, D.Sc., M.A.
Comparative Anatomy and Zoology—Professor E. Ray Lankester, M.A., F.R.S., and Professor A. Milnes Marshall, D.Sc., M.A.
Geology and Palæontology—Professor P. Martin Duncan, M.B., F.R.S., and R Davies Roberts, Esq., D.Sc., M.A.

UNIVERSITY OF GLASGOW.—Preliminary Examinations in General Education were held on April 1, 2, and 3, when 332 candidates appeared. For the Professional Examinations, 190 candidates entered, and the following passed:—

First Professional Examination (New Regulations) in Chemistry, Botany, and Zoology:—

Thomas G. Alexander. Robert Beith, Andrew Lees Bell, Benjamin Blaine, John G. Burns, William Campbell, Joseph Carroll, Fergus Carswell, Norman M'Leod Clerk, Robert Davidson, Thomas Spence Dunn, Alexander Galbraith, James Gardner, John M'H. Gell, James F. Gemmell, William Gibb, Thomas G. Grime, Francis Johnstone, Isaac C. Hodgson, Alexander Jarvie Howel, Robert Horn, Robert R. Hunter, Creighton Hutchinson, Matthew Killoch, William Little, James D. MacDonald, Neil C. MacDonald, Thomas F. MacDonald, John F. M'Gregor, H. Malcolm M'Intosh, John M'Intyre, Peter M'Lean, James M'Nish, Matthew Martin, James Maxwell, Henry Mason, William C. Muir, William Patullo, William G. Pretsell, Richard A. D. Robb, William J. G. Robinson, Andrew Semple, Dugald Sinclair, John Sinclair, Alexander J. F. Skottowe, William Anderson Soga, Robert Stewart, William C. Taylor, Edward T. Turnbull, William Waddell, Henry Pelham Webb, John C. Wilson, David Gardner, James Jardine.

First Professional Examination (Old Regulations) in Chemistry, Botany, and Elementary Anatomy:—

Robert M. J. Bennie, George V. Fourquemin, John Logan, John Ferguson M'Gregor, John Mathie, William H. Hay Robertson, Patrick A. Smith, and C. B. Hunter.

Second Professional Examination (Old Regulations) in Zoology, Physiology, and Advanced Anatomy:—

John Bond, John T. Brown, James Donald, John Goff, Oliphant Hamilton, C. Buchanan Hunter, John H. Low, Robert Miller, Donald Morrison, Alexander M'Indoe, David R. Oswald, James Rae, William Russell, Donald Simpson, John Stevenson, Thomas Stewart, Robert G. Taylor, Henry Fraser.

Second Professional Examination (New Regulations) in Descriptive Anatomy and Physiology:—

Roland Blaney. John Brown, John Buchanan, John Carruthers, David Durran, H. E. N. Dobie, David Gardner, James W. Grange, George Hadden, John M. Hunt, Charles Jamieson, John Johnstone, John Keay, George G. Kenny, David Laurie, Dugald M'Phee, John Morris, William Morrison, M.A., Alexander F. Reid, James C. Robertson, Edward Williams, William M. Williams, Frank Wilson, George Wolstenholme, and J. M. Robertson.

The following gentlemen have received the degree of M.D.:—

Archibald Brown, M.B., Scotland. (Thesis, "Etiology and Treatment of Puerperal Eclampsia.")
Charles D. Hunter, M.B., Scotland. (Thesis, "Australia as a Refuge for the British Consumptive.")
John Hutchinson, M.B., Ireland. (Thesis, "Diphtheria.")
Thomas Reid, M.B, Scotland. (Thesis, "Puerperal Eclampsia.")
Robert Sinclair, M.B., Scotland. (Thesis, "The Treatment of Rheumatism.")
Arthur R. Waddell, M.B., Scotland. (Thesis, "Nervous Irritability as a Hereditary Peculiarity.")
James Campbell, M.B., Scotland. (Thesis, "Queensland, Australia, as a Resort for Phthisical Patients.")
Robert Ferguson, M.B., Scotland. (Thesis, "Phlegmasia Dolens as Connected with Anæmia.")
William James Fleming, M.B., Scotland. (Thesis, "The Dicrotic Notch in Pulse-Tracings.")
David Sime, M.B., Scotland. (Thesis, "The Non-identity of Croup and Diphtheria.")
James Thomson, M.B., Ireland. (Thesis, "Puerperal Fever.")
John D. MacDonald, M.B., Scotland. (Thesis, "Notes on Dysentery from the Tropics.")
Thomas Oliver, M.B., Scotland. (Thesis, "Heredity viewed in its Relations to Responsibility.")

The following received the Degrees of M.B. and C.M.:—

Adam, Thomas B., Scotland.
Allan, William, Scotland.
Barton, John A., Scotland.
Birchall, Thomas B., England.
Buchanan, Peter, Scotland.
Cameron, John M., Scotland.
Chalmers, Archd. K., Scotland.
Cook, Thomas Dixon, England.
Crawford, Alexander W., Scotland.
Crawford, John, Scotland.
Cunningham, Peter H., Scotland.
Davidson, Alexander, Scotland.
Donald, William S., Scotland.
Duff, John, Scotland.
Fullarton, Neil, Scotland.
Hamilton, Robert, Scotland.
Hargreaves, Mark K., England.
Haworth, Edwin, England.
Jones, Edwin White, England.
Lees, Robert, Scotland.
Longwill, David, Scotland.
Lyon, Robert, Scotland.
Lyons, Harry S., Biscay.
M'Allister, William, Scotland.
M'Aulay, Angus, Scotland.
M'Kenzie, James B., Scotland.
M'Kenzie, William J., India.
M'Phee, Angus, Scotland.
M'Vie, William, Scotland.
Mechan, Arthur, Scotland.
Mecredy, Robert D. W., Ireland.
Mitchell, Dugald, Scotland.
Moir, William B., Scotland.
Muirhead, Islay B., Scotland.
Mungall, Daniel, Scotland.
Nandi, Sambhu Chandra, India.
Napier, Charles, Scotland.
Nicol, William, Scotland.
Peden, William K., Scotland.
Pinck, Charles Harry, England.
Pinkerton, Charles, Scotland.
Pollock, Andrew Barr, Scotland.
Porter, Robert, Ireland.
Smith, John M., Scotland.
Stevenson, Ralph D., Australia.
Storer, George, Scotland.
Taylor, William, Scotland.
Wickens, George F., England.
Willis, William R., Scotland.
Wilson, James S., Scotland.
Wilson, John Neil, Scotland.
Yair, John M., Scotland.
Yarrow, Henry, Scotland.

The following received the Degree of M.B. alone:—

Glaister, John, Scotland.
M'Keith, Wm. D., Scotland.
Sinclair, John, Scotland.

The following received the Degree of C.M. alone:—

Allsworth, Walter, M.B., England.

The following gentlemen were named as entitled to Honours, to High Commendation, and to Commendation, on account of distinguished merit at the various examinations for the degrees of M.B. and C.M.:—

I. *Honours.*—Peden, William K.; Stevenson, Ralph D.
II. *High Commendation.*—Chalmers, Archd. K.; Muirhead, Islay B.; Nicol, William.
III. *Commendation.*—Adam, Thos. B.; M'Allister, William; Glaister, John; Pinkerton, Charles.

University of St. Andrews.—The following gentlemen, having passed the required examinations, had the degree of Doctor of Medicine conferred upon them on April 29:—

Alderson, Frederick Henry, M.R.C.S., L.S.A., L.M., Hammersmith.
Bride, John, M.R.C.S., L.S.A., Wilmslow, Cheshire.
Condon, James Hunt, M.R.C.S.L., L.M., Cawnpore, India.
Lyons, Richard Thomas, M.R.C.S., 364, Rue St. Honoré, Paris.
Mann, John Dixon, L.R.Q.C.P.I., M.R.C.S., Manchester.
May, Harry, L.R.C.P.L., M.R.C.S., L.S.A., Ware, Herts.
Murray, James, L.K.Q.C.P.I., M.R.C.S., London.
Threadgale, Robert Easey, L.R.C.P. Edin., L.F.P.S.G., L.S.A., Upper Norwood.
Whishaw, John Charles, M.R.C.S.L., Earl's Court.
Wood, Richard, L.R.C.P.L. and Edin., M.R.C.S., L.S.A., Bromsgrove.

Royal College of Physicians of London.—The following gentlemen were admitted Members on April 29:—

Dunbar, Jas. John Macwhirter, M.B. Lond., 77, Ladbroke-grove, W.
Lubbock, Montagu, M.B. Lond., 6, Foulis-terrace, S.W.
O'Connor, Bernard, M.D. Queen's Univ., 40, Brook-street, W.
Tirard, Nestor Isidore Charles, M.B. Lond., King's College, W.C.
Whittle, Ewing Mould Glynn, M.D. Dub., Cambridge.

The following gentlemen were admitted Licentiates on April 29:—

Bailey, Robert Greenoak, Public Dispensary, Leeds.
Billiald, Richard Atherstone, Kington, Herefordshire.
Bovill, Henry Howard, 32, James-street, Buckingham-gate, S.W.
Bush, Erasmus, New Thornton Heath, Croydon.
Butler, Herbert Paton, Lambeth Infirmary, S.E.
Chaffey, Wayland Charles, 28, Cedars-road, S.W.
Challinor, Samuel Macmillan, Bolton.
Clark, William Thomas Marston, Cross Deep, Twickenham.
Dickinson, Thomas Vincent, 33, Sloane-street, S.W.
Gibbs, Alfred Napier Godby, Clifton, Bristol.
Hartley, John, Middlesex Hospital, W.
Henty, Sydney Haviland, 308, Camden-road, N.
Hine, Henry, Nottingham.
Holland, Edward Wilmot, 140, York-road, S.E.
Kemp, John Robert, Richmond, Surrey.
Pepler, William Henry, St. Bartholomew's Hospital, E.C.
Plummer, Charles Joseph, 3, Wilton-terrace, S.E.
Rake, Bevan Neave, Guy's Hospital, S.E.
Renner, Charles, M.D. Würzburg, 42, Harley-street, W.
Spackman, Henry Robert, 14, Percy-circus, W.C.
Stevenson, Frederick Coney, M.B. Toronto, Castletown, Isle of Man.
Wheeler, William Henry, 63, King Edward's-road, E.
Wilkins, Henry George Gastril, Ealing, W.
Williams, William Daniel Campbell, 116, Gower-street, W.C.

Royal Colleges of Physicians and Surgeons, Edinburgh.—Double Qualification.—The following gentlemen passed their First Professional Examination during the April sittings of the examiners:—

Aitchison, Thomas, Northumberland.
Aitken, Matthew Steel, Glasgow.
Blacker, Arthur Edward, Somersetshire.
Carter, James Thomas, Midlothian.
Chisholm, John Oliver, Jedburgh.
Collins, Edward Tenison, Birmingham.
Dobb, James, Ince.
Fletcher, William John Harvey, Staffordshire.
Freeman, Edward Joseph, co. Clare.
Gee, Thomas Ernest, Nottinghamshire.
Goold, Hugh Charles, Norwich.
Gray, James, Ross-shire.
Greenleaf, Alfred William, Ipswich.
Gunn, William, Sutherlandshire.
Hamilton, William Frederick, Londonderry.
Holmes, Joseph, Leeds.
Jeffries, John Nagle, Kinsale.
Johnson, William, Durham.
Jones, William Richard Parry, Anglesey.
Kiddle, Isaac, Surrey.
Maclaren, Alexander, Edinburgh.
Main, Robert, Newcastle-upon-Tyne.
Mawson, James Hargreave, Hambleton.
Mills, Wilton, Whitworth.
Murray, John, Abyth.
Nevin, James Loughlin, co. Antrim.
Osborne, Henry Dobson, Dungiven, co. Derry.
Paul, David Robert, Vizagapatam.
Paulin, John, Isle of Man.
Paulin, William Bradshaw, Halifax, Nova Scotia.
Sinclair, George, Orkney.
Skinner, John Jordan, Redditch.
Williams, William Montagu Venables, Denbighshire.
Wilson, James Patrick Andrew, Edinburgh.
Wotherspoon, Robert, Lindsay, Glasgow.

The following gentlemen passed their Final Examination in April and May, and were admitted L.R.C.P. Edin. and L.R.C.S. Edin.:—

Babtie, William, Dumbarton.
Bartrum, Alfred Ernest, Bath.
Bonsall, George Richard Edleston, Aberystwith.
Boon, Philip Henry William, Madras.
Boyd, Henry Johnston, Hillsboro'.
Brady, Edward, Cork.
Calder, Marcus, Glasgow.
Cameron, Robert Duncan, Liverpool.
Clarke, George Cuthbert, Middlesex.
Dobb, James, Ince.
Flewitt, Walter, Birmingham.
Fraser, Archibald Henry, Umballa.
Freeman, Edward Joseph, County Clare.
Gibbons, Charles Samuel, Lincolnshire.
Gray, James, Ross-shire.
Hackman, Leonard King Havelock, London.
Hayes, James Bennett, Cork.
Hoskyns, Edward John Adderton, Derby.
Jones, John Thomas, Aberganolwyn.
Jones, William, Aberystwith.
Keating, James, County Limerick.
Kennison, John Alexander, Melbourne.
Kharegat, Mervanji Pestanji, Bombay
McBeath, Abercromby, Banffshire.
McDonnell, Edmund, County Antrim.
McGavin, John, Renfrewshire.

Mackay, William, Woburn.
Morgenrood, William George, Cape of Good Hope.
Neve, Arthur, Brighton.
Nichol, John Crawhall, co. Durham.
Oakley, Harry Callander, Hornsey.
Pollock, Charles Frederick, Dumbartonshire.
Rankin, Guthrie, Kilmarnock.
Strong, Robert Gravenor, South Australia.
Tuckey, Thomas Brodrick Albert, Cork.
Tweed, John Moore, Ballymoney.
Waterson, William Thomas Waterson, Northumberland.

The following gentlemen passed their First Professional Examination during the recent sittings of the examiners:—

Bremridge, John, North Devon.
Harris, Frederick Rutherfoord, Mongalore, India.
Lawrence, Norman Henry, Cape of Good Hope.

And the following gentlemen passed their Final Examination and were admitted Licentiates of the College:—

Baylor, Robert Jonathan, Fermoy.
Clements, Thomas, Glasgow.
Collier, William, Cambridgeshire.
Eadie, John, Alloa.
Harris, Frederick Rutherfoord, Mongalore, India.
Levis, Samuel George, co. Cork.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed their primary examinations in Anatomy and Physiology at a meeting of the Board of Examiners on the 29th ult., and when eligible will be admitted to the pass examination, viz.:—

Beebe, Charles E., student of Guy's Hospital.
Brown, Arthur P. F., of Guy's Hospital.
Corner, Edward, of King's College Hospital.
Graham, George H., of Guy's Hospital.
Griffiths, Hugh St. D., of King's College Hospital.
Halliburton, William D., of University College Hospital.
Jones, Maurice P., of Guy's Hospital.
Marston, Francis C., of St. Thomas's Hospital.
Maynard, Edward E., of St. Thomas's Hospital.
Paley, Frederick J., of St. Bartholomew's Hospital.
Penn, John E., of University College Hospital.
Penrose, Francis G., of University College Hospital.
Rackham, Arthur R., of St. Bartholomew's Hospital.
Rands, St. John O., of Guy's Hospital.
Rayner, Hugh, of St. Bartholomew's Hospital.
Searle, Alfred, of Guy's Hospital.
Stroqan, Frederick, of St. Bartholomew's Hospital.
Wise, Charles H., of the Westminster Hospital.

Six candidates were rejected. The following passed on the 30th ult., viz.:—

Broadbent, Frank, student of St. Bartholomew's Hospital.
Brogden, Richard W., of Guy's Hospital.
Bromley, Henry U., of St. Mary's Hospital.
Carr, Thomas, of Guy's Hospital.
Dingley. Edward A., of University College Hospital.
Downes, Howard, of University College Hospital.
Evans, Thomas G. C., of Ct. Bartholomew's Hospital.
Fenner, Robert N., of King's College Hospital.
Hoyland, Stanley S., of St. Bartholomew's Hospital.
Kendall, George, of Guy's Hospital.
Locke, George, of the Charing-cross Hospital.
Perez, George V., of University College Hospital.
Samuel, Robert T. N., of King's College Hospital.
Shadwell, Arthur, of St. Bartholomew's Hospital.
Slater, Druce J., of St. Bartholomew's Hospital.
Tatam, Edwin C., of King's College Hospital.
Verity, Herbert W. S., of King's College Hospital.
Williams, Arthur J., of St. Bartholomew's Hospital.

Six candidates were rejected. The following gentlemen passed on the 3rd inst., viz.:—

Birch, Henry P., student of University College Hospital.
Davies, William T. F., of Guy's Hospital.
Fink, George H., of University College Hospital.
Hunt, Howard W., of St. Bartholomew's Hospital.
Lace, William F., of King's College Hospital.
Maude, Arthur, of St Bartholomew's Hospital.
Roberts, Arthur H., of St. Bartholomew's Hospital.
Roughton, Edmund W., of St. Bartholomew's Hospital.
Rouse, Rolla E., of St. Thomas's Hospital.
Shone, W. Vernon, of University College Hospital.
Spicer, Robert H. S., of St. Mary's Hospital.
Stiles, Arthur J., of University College Hospital.
Tatham, Charles J. W., of King's College Hospital.
Townsend, Edward B., of King's College Hospital.
Tytheridge, Walter R., of St. Mary's Hospital.
Whitcombe, P. Percival, of St. Mary's Hospital.
Wilcox, Ernest, of St. Bartholomew's Hospital.
Williams, Edward R., of St. Bartholomew's Hospital.
Woodhouse, Alfred E. C., of Guy's Hospital.
Worthington, Sidney, of Guy's Hospital.

Four candidates were rejected. The following gentlemen passed on the 4th inst., viz.:—

Overend, Walter, student of St. Bartholomew's Hospital.
Payne, James R., of St. Bartholomew's Hospital.
Russell, R. Hamilton, of King's College Hospital.
Stokes, Francis A., of University College Hospital.
Turner, H. Swetenham, of St. Mary's Hospital.
Vos, George H., of St. Bartholomew's Hospital.

Four candidates were rejected, including one who had an additional three months.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At a meeting of the Court of Examiners held on April 23 and following days, the undermentioned gentlemen having passed their final examinations for the Letters Testimonial, and having made and signed the declaration, were admitted Licentiates of the College, viz.:—

Atkinson, James Law.
Barns, John Edward Snow.
Blyth, John Graham.
Cassidy, James John Francis.
Clancy, Daniel Bennett.
Crampton, Thomas Hobbs.
Donnelly, Patrick.
Ferguson, Henry Lindo.
Ffrench, Richard Henry.
Finnegan, A. Daniel O'Connell.
Geoghegan, Thomas Edward.
Gilbert, William Frederick.
Gloster, Edward.
Hall, Henry Stoker Wilson.
Jones, William Percy.
Kennedy, Michael Colville.
Mahon, Henry Greenwood.
Morgan, Anthony Hickman.
O'Gara, Patrick.
O'Keeffe, William Joseph.
Sawyer, Richard Henry Stewart.
Wade, Michael Andrew.
Walsh, Michael.
Warnock, John.
Warren, Richard Benson.
Yates, Edward Tongue.

APOTHECARIES' HALL, LONDON.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, April 29:—

Pestonji, Bejanji, Bombay.
Williams, William Rees, 40, Cambridge-street, S.W.

The following name was inadvertently omitted from the list of those who passed the Preliminary Examination in Arts on April 23 and 24:—

In the Second Class—George Saunders Clarke.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to all new Appointments that take place.

ATKINSON, R., B.A. Cantab., F.R.C.S.—Junior Assistant Medical Officer to the Worcester County and City Lunatic Asylum.

BIRTHS.

ANDREWS.—On March 17, at Albury, Murray River, Australia, the wife of Arthur Andrews, M.R.C.S., of a daughter.

CLARKE.—On April 25, at Wakefield, the wife of Henry Clarke, L.R.C.P., Surgeon to H.M. Prison, of a daughter.

LANGSTON.—On May 3, at 29, Broadway, Westminster, the wife of Thomas Langston, L.R.C.P., of twins (boy and girl).

LEONARD.—On April 27, at 49, Loraine-road, London, N., the wife of H. J. Leonard, M.B., of a son.

SANDERSON.—On May 4, at Fairfield, Penrith, the wife of Thomas Drummond Sanderson, M.B., F.R.C.S., of a daughter.

SETON.—On April 27, at 12, Thurloe-place, S.W., the wife of D. Elphinstone Seton, M.D., of a son.

MARRIAGES.

BARCLAY—MOUNT.—On May 1, at North Kensington, William Mackenzie Barclay, M.D., of Grantown, Inverness-shire, to Winifred Maud, fourth daughter of George Mount, Esq., of Wellington-road, St. John's-wood.

COOPER—SMYTH.—On May 4, at Hampstead, Thomas Henry Cooper, M.R.C.S., to Emma Eliza, eldest daughter of Luke Dowel Smyth, M.D., of 83, South Hill-park, Hampstead.

FURLEY—BEET.—On April 21, at Ashford, Kent, Alcock George Furley Esq., to Alice Mary, second daughter of Wm. Beet, M.D., of Ashford.

HODSON—KENDALL.—On April 21, at Clapham-common, Ernest Rust Hodson, B.A. Cantab., son of Charles F. Hodson, F.R.C.S., of The Chantry, Bishop Stortford, to Margaret M., daughter of the late T. M. Kendall, F.R.C.S., of King's Lynn.

LORD—SKINNER.—On April 28, at Eaton-square, Frederick Lord, L.R.C.P. L.R.C.S., to Eliza, youngest daughter of the late Henry Skinner, Esq. of Tiverton, Devon.

PATTISON—JOYCE.—On April 29, at St. Martin's-in-the-Fields, Edward Eaton Pattison, L.R.C.P., M.R.C.S., to Minnie, eldest daughter of Walter Joyce, Esq.

STRANGE—LEAK.—On April 29, at Hemsworth, J. T. Strange, Esq., of Aldermaston, to Margaret Alice, only daughter of Thomas Mallorie Leak, M.D., of The Cedars, Hemsworth, near Pontefract, Yorkshire.

WALKER—BUCKBY.—On April 29, at Bulwell, W. W. Walker, Esq., of Beech House, Bulwell, to Margaret Jemima, eldest daughter of R. G. Buckby, L.R.C.S., of Bulwell House.

WOOD—BALLISTON.—An April 29, at Alverstoke, Joseph Wood, M.D., Staff-Surgeon R.N., of H.M.S. *Himalaya*, to Matilda Clarributt, eldest daughter of Staff-Captain Balliston, R.N., of H.M. Yacht *Alberta*, and 4, Clarence-square, Gosport.

DEATHS.

FOSTER, JOHN FREDERICK, M.D., F.R.C.S., late of Hartley Wintney Hants, and Guernsey, at 44, Eastlake-road, Brixton, on April 26, in his 71st year.

HEWITT, MARY WILLIAMS, wife of David Basel Hewitt, M.D., of Beech House, Prestwich, Manchester, on May 1, aged 44.

JACKSON, MARIE ADRIENNE, wife of A. C. Jackson, L.R.C.P., of Cape Town, South Africa, at 49, Wellington-road, London, N.W., on April 29, in her 32nd year.

MABERLEY, WILLIAM HENRY, M.D., F.R.C.S., at 1, Minford-gardens, West Kensington-park, on April 23, aged 27.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

ALNWICK INFIRMARY.—House-Surgeon. (*For further particulars see Advertisement.*)

CENTRAL LONDON SICK ASYLUM DISTRICT.—Principal Medical Officer. (*For further particulars see Advertisement.*)

CUMBERLAND INFIRMARY, CARLISLE.—House-Surgeon. Applications, with testimonials, to be sent to the Secretary, Joseph Lowthian, Esq., on or before May 11.

GREENWICH UNION INFIRMARY.—Assistant Medical Officer. (*For further particulars see Advertisement.*)

LONDON HOSPITAL, WHITECHAPEL, E.—Assistant-Physician. (*For further particulars see Advertisement.*)

NOTTING-HILL PROVIDENT DISPENSARY.—House-Surgeon. Applications, with testimonials, to be sent to the Hon. Secretary, W. P. Collins, Esq., 8, Pembridge-gardens, Notting-hill, W., on or before May 25.

ROYAL FREE HOSPITAL, GRAY'S-INN-ROAD.—Junior Resident Medical Officer. Candidates must possess a medical or surgical qualification. (*For further particulars see Advertisement.*)

ST. PETER'S HOSPITAL, 54, BERNERS-STREET, W.—House-Surgeon. (*For further particulars see Advertisement.*)

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Battle Union.—The Second District is vacant by the resignation of Mr. Josiah Sarjant: area 3500; population 867; salary £25 per annum.

Eton Union.—Mr. William Fairbank has resigned the Burnham District: area 12,880; population 4843; salary £90 per annum.

Hailsham Union.—The Fourth District is vacant by the resignation of Dr. Josiah Sarjant: area 9775; population 2050; salary £60 per annum.

Nantwich Union.—The Audlem District is vacant by the resignation of Dr. F. F. Jay: area 11,045; population 2663; salary £30 per annum.

Saffron Walden Union.—Mr. G. S. Watson has resigned the First District: area 13,501; population 3141; salary £80 per annum.

Whitby Union.—Mr. Charles M. Mellor has resigned the Fylingdales District: area 13,010; population 1558; salary £15 per annum.

APPOINTMENTS.

Bedminster Union.—Edmund Thomas Hale, L.R.C.P. and L.R.C.S. Edin. and L.S.A. Lond., to the Fourth District.

Halifax Union.—Mark E. B. Nicholson, M.R.C.S. Eng., L.S.A., to the Staniland District.

Halstead Union.—John Cawful Mackay, L.R.C.P., L.R.C.S., and L.M. Edin., to the Fourth District.

Knighton Union.—Frederic Bromley, M.R.C.S Eng. and L.S.A. Lond., to the Prestéigne District.

Newport Pagnell Union.—Frederick William Dobson McGachen, L.F.P.S. Glasg. and L.M., to the Seventh District.

Plympton St. Mary Union.—James Bostock Jacob M.B. Univ. Dub., L.R.C.S. Ire., L.M.K.& Q.C.P.I., to the Fifth District

Truro Union.—Francis George Herbert Whitley M.R.C.S., L.S.A., to the St. Agnes District.

Ripon.—Thomas Fairley, F.C.S., as Analyst for the berty and City of Ripon.

NATIONAL ORTHOPÆDIC HOSPITAL.—At a duly convened meeting of the Governors of this Hospital, held on the 28th ult., it was resolved:—"That the name and title be altered to the 'National Hospital for the Deformed,' for the treatment of distortions of the spine and all malformations of the human frame; it being considered that this title and description more palpably defines the objects and practice of this charity."

A NEW REMEDY FOR ELEPHANTIASIS.—A correspondent of the *Times* is responsible for the following report of alleged cases of elephantiasis, in which chiefly the legs and feet are affected, becoming rough, scaly, and swollen to great size by serous infiltration. The disease is frequent, he says, in Brazil, and it is common to resort to a remedial treatment of it by compression, but this is found to give but slight relief; nor do certain surgical processes, as ligature of the principal artery of the limb, appear to have been successful. M. Moncorvo, a short time ago, conceived the idea of trying electricity as a remedy. He at first used only induced currents, and obtained in severa patients, a considerable diminution of the leg and thigh, but not complete cure. The method was, however, on consideration by MM. Moncorvo and Aranjo, changed to a combined use of induced and continuous currents, and this is said to have entirely removed the infirmity in a number of cases. The continuous currents are said to have the effect of softening, and to a certain extent liquefying, the indurated tissues, while the intermittent currents are supposed to cause a re-absorption of the tissues thus prepared. We need not remind our readers that the modes of treatment by graduated compression, by ligature, etc., are anything but new to European surgeons.

THE ROYAL SOCIETY.—Among the fifteen candidates for the Fellowship of the Royal Society selected by the Council, and recommended for election in June next, are three members of the medical profession—Dr. Clifford Allbutt, of Leeds; Dr. John Rae, of Arctic Expedition fame; and Professor James Emerson Reynolds, M.D., Professor of Chemistry in the University of Dublin. Chemical science is also represented in the list by Professor Attfield and Dr. W. A. Tilden.

PATHOLOGICAL ANATOMY AT THE PARIS FACULTY.—In the introductory lecture to his course of pathological anatomy (published *verbatim* in the *Progrès Méd.*, April 24), Prof. Charcot gives an account of the mode of teaching this subject in the Paris Faculty at the present time. Formerly purely theoretical, such teaching, he says, under the auspices of Prof. Vulpian, underwent important changes in 1868, and has continued to make great progress. Greatly as Prof. Charcot has always himself aided in such progress, he still sees that much has to be accomplished; but he evidently views with no favourable eye the project of M. Ferry, which would tend to the ultimate severance of the teaching of pathological anatomy from clinical teaching. Such a separation, he says, is beginning to be felt as a mistake in Germany by Virchow, Cohnheim, and others. Most of the German professors of pathological anatomy, Prof. Charcot observes, deprived as they are of the stimulus of clinical observation, gradually but certainly cease to interest themselves in the pathological points of view, and are found attaching themselves to the study of pure histology, which, in their position, alone presents to them any truly scientific attractions. "I am," he concludes by saying, "as strong a partisan as anyone for foreign importations, as far as these are of a legitimate character. Far am I from being the adversary of specialists, and I know by experience the extent to which pathologico-anatomical investigations render special studies necessary. But bitterly should I regret if in this matter our efforts only led to a servile imitation of what is done abroad. More particularly do I express the wish that in our country any professor charged with teaching pathological anatomy *ex cathedrâ* may be obliged, conformably to what we may term the French tradition, to be at the same time a clinician."

DEFECTS OF THE ARTISANS' DWELLINGS ACT.—The proceedings of the Metropolitan Board of Works at their last week's meeting will not be productive of much satisfaction to the ratepayers of the Holborn district. A further report was presented by the Works Committee, stating, with reference to the Gray's-inn-road improvements, on which a memorial had been presented, that it was impossible to proceed with more despatch with the works in question, until certain restrictions placed upon the Board by the Artisans' Dwellings Acts were removed. Mr. Dresser Rogers, in moving the adoption of the report, said the Board were powerless in the matter. Until the act under which they were proceeding was amended they could do no more than they had already attempted towards providing improved dwellings for the people. The report was accordingly adopted, and as no legislation on this subject can possibly be expected at present, the neighbourhood is likely to remain in the dilapidated condition to which it has been reduced through the premature commencement of a scheme which it has been found impossible to carry to a successful termination.

TYPHUS FEVER AT BIRKENHEAD.—Recently, at the Birkenhead Police-court, a tailor of Birkenhead was summoned under the following circumstances. The defendant had a servant in his house on March 9 suffering from typhus fever, and had her removed to the hospital, where she died a few days afterwards. The defendant was served with a notice to disinfect his house, and on the officers calling some days after they found a quantity of filthy bedding on the floor of the kitchen. The defendant stated that he had thoroughly disinfected the room, had had the sheets washed in chloride of lime, and had had the bed burnt at night. The nuisance inspector explained to the magistrate that the present proceedings had been taken

because this was the thirty-first case of typhus fever which had originated in that neighbourhood from the exposure of a diseased body at a "wake" last November, and the disease had not yet been stamped out. Evidence was subsequently submitted showing that the room and bedding had been thoroughly disinfected; the magistrate therefore dismissed the case, but he remarked that under the circumstances detailed by the nuisance inspector it had very properly been brought before the Court.

MEATH HOSPITAL AND COUNTY DUBLIN INFIRMARY.—On Saturday, May 1, the prizes given at the close of the winter session were awarded to the successful candidates in the theatre of the institution. Mr. Porter, Surgeon-in-Ordinary to the Queen, and Senior Surgeon to the Hospital, presented the surgical, and Dr. A. W. Foot, Senior Physician, presented the medical prizes. The following is a list of the awards:—Senior Surgical Prize, Arthur H. Murray; Junior Surgical Prize, John Mallins. Medical Prizes—First, Edward Emmanuel Lennon; Second, Austin J. Cockle.

HOT RECTAL DOUCHE.—Dr. Chadwick read a paper at the Boston Medical Society (*Boston Journal*, April 8), in which he stated that he had been led to adopt the rectal douche (with about a quart of hot water) in gynæcological practice as a substitute for the vaginal douche, which entails so much trouble that in many cases it either cannot be or is not efficiently employed. The rectal douche is more easily used, and he cited cases showing its efficacy in peri-uterine inflammation after the more active symptoms had subsided. He had also found it of great service in several cases of chronic diarrhœa and dysentery.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

F. D. Edgerton, M.D., Middleton, Connecticut, U.S.A.—Letter and enclosure received.

A New Disease.—We learn from the *Boston Medical and Surgical Journal* that when a death occurs in Fiji it has to be registered, and the native scribes not unfrequently fill the space left for "cause of death" with the words, "Medicines supplied by the missionaries."

A Visitor.—The clerical gentleman you saw at the primary examination was the Rev. Dr. Potter, who is also a graduate in medicine of the University of New York; he was introduced by Dr. William Darling, F.R.C.S. Eng., the Professor of Anatomy in the same University.

The Russo-Turkish War.—From a paper lately published on the work done by the Russian Red Cross Society in Roumania during the war, it appears that altogether eleven ambulance trains were employed in the conveyance of the sick and wounded, four being supplied by the military authorities, and seven by the Red Cross Society. The total number transported by the trains in 331 journeys was 2689 officers, 75,099 men, and 1350 sick or wounded Turkish prisoners. Besides these, 22,247 sick and wounded officers and men were taken on specially hired steamers down the Danube to Ibraile. The *personnel* employed by the Red Cross Society comprised 36 delegates and 14 agents for administrative purposes, 44 surgeons, 39 medical students, 53 dressers, 43 female students and dressers, and 516 sisters of mercy, while the money expended amounted to upwards of £200,000.

Now and Then.—Up to 1810 the metropolis had been supplied with water by three or four trading companies—the New River, the Chelsea, the Thames, and one or two minor companies. The average rate at which they supplied water was twenty-seven shillings per annum for each house.

Army Surgeon.—The late Sir William Fergusson, Bart., left two sons—the present Sir James, who is a barrister; and Captain Charles Fergusson, who has just returned home, severely wounded, from Cabul.

D. L. P., Herefordshire.—The cases of poisoning you refer to occurred in Norfolk in 1846. No less than twenty persons lost their lives by poison administered by one individual. No coroner's inquiry was held upon them. A serious cause of the commission of these crimes was believed to be the infrequency of coroners' inquests throughout the country. At the period in question so much jealousy had arisen at courts of quarter-session with regard to the charges consequent upon holding those inquiries, as to prevent their being holden, and inquests had in many cases been omitted that ought to have been held.

Oleomargarine.—Yes, it has recently been officially stated that no less than 600,000 tons of this new substitute for butter had been shipped from the United States to Europe during the past year.

A Provincial Teacher.—At the last primary examination for the diploma of membership of the Royal College of Surgeons, out of the 154 candidates examined no less than forty-six were referred to their anatomical and physiological studies for three months, including three who were so inefficiently prepared that they had to be referred for an additional three months.

Infringing the Factory Act.—A firm of letterpress printers at Charing-cross has been fined £3 by the Bow-street police magistrate for employing children without obtaining certificates of fitness from a surgeon, and for other offences under the Factory Act. The defendants admitted the offences, and expressed regret for not complying with the provisions of the Act.

Remarkable Revivification.—The Government inquiry into the extraordinary resuscitation of the man Takac, after he was cut down from the gallows, has been concluded, but the result is, we believe, not yet known. Dr. Sikor, the medical men who officially attested Takac's death, has published a long account to exonerate himself from the accusation of the press, of not having properly attended to his duties. Takac had been repeatedly imprisoned, and had suffered badly from prison scrofula. Both his neck-glands were affected with big tumours. Dr. Sikor attributes the extraordinary resuscitation of the man to this circumstance in connexion with the rapid transport to the hospital over bad pavement, causing great shaking of the body, and to the prompt and appropriate efforts at revivification which he describes.

For the Cabmen's Well-being.—The public interest continues to be considerately shown for the well-being of cabmen by the erection of additional shelters. There are now in the metropolis twenty-six of these well-appointed places of resort for cabmen. The latest has been provided by the generosity of Mrs. Robert Trotter, in substitution of the wooden building that has for some time been used for that purpose at St. Clement's Danes, Strand. It is a commodious and well-furnished shelter, and a noticeable feature in it is the provision for a small library.

Anti-vaccinators and Electioneering.—A Parliamentary candidate gave a neat reply when worried by one of the crotcheteers the other day. The advocates of the repeal of the Compulsory Vaccination Act having waited upon him and asked if he would vote for their pet idea, he said, "If you will only vote for me to-morrow you may all get the small-pox the next day if you like."

Citizen.—The abominable truck drinking system you inquire about was swept away by a clause inserted in the Merchant Shipping Act, 1853, which placed the ballast-heavers of the Port of London under the control of the Corporation of the Trinity House. Previously the ballast-heavers could only get work through a body of riverside publicans and middlemen, who made them drink before they would give them a job, forced drink upon them while at work and after it was done; and half their wages was spent in drink.

Z., Sussex.—The first census of Great Britain was in 1801. Before this first enumeration of the people the number of the population was a fruitful topic with party writers.

A Subscriber.—Yes; Lord Coke mentions an instance in which Chief Justice Fineux, in the reign of Henry VII., held an inquest on the body of a man slain in open rebellion. In a general sense the Chief Justice of the Court of Queen's Bench is, by virtue of his office, the supreme Coroner of England, and may, if he pleases, hold an inquest or otherwise exercise the office of coroner in any part of the kingdom.

C. C., Bayswater.—The Bill introduced into the House of Commons in 1864, for the purpose of enabling the Secretary of State for India to obtain a sufficient number of assistant-surgeons from those who had entered the Queen's general service by competition to form a medical staff corps for India, was thrown out on the third reading.

BOOKS, ETC., RECEIVED—

Himalayan India, its Climate and Diseases, by F. N. Macnamara, M.D., F.R.G.S.—Aspiration of the Knee-Joint, by Henry O. Marcy, A.M., M.D. Camb., Mass.—Annual Report of the Stirling District Lunacy Board for February, 1880—A System of Medicine, by J. Russell Reynolds, A.M.D., F.R.S., vol. v.—Tracheotomy in Laryngeal Diphtheria, by Robert William Parker—The Human Body and its Functions, by H. Sinclair Paterson, M.D.—Bericht der erstem österr Privatheilanstalt für Sprachkranke zu Wien, 1877, 1879—Healthy Homes, by Wm. Newman, M.D., F.R.C.S.—The Cobham Journals, by Eleanor A. Ormerod, F.M.S.—Alcohol its Functions and Place, by Thomas R. Fraser, M.D., F.R.S.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Centralblatt für die Medicinischen Wissenschaften—Nature—Revue Médicale—Occasional Notes—Gazette Hebdomadaire—Louisville Medical News—American Bookseller—El Siglo Medico—Guy's Hospital Gazette—Monthly Homœopathic Review—Giornale Internazionale delle Science Mediche—Archives Générales de Médecine—Veterinarian—Glasgow Medical Journal—Edinburgh Medical Journal—Boston Medical and Surgical Journal—Rotherham and Masbro' Advertiser—Education Journal of Trinity College, London—Archives of Laryngology—Churchman.

COMMUNICATIONS have been received from—

Dr. B. Yeo, London; Dr. James Irving, Tunbridge Wells; The Secretary of the Royal Institution; The Registrar of the Royal College of Physicians, London; The Registrar of the University of London; Sanitary Commissioner, Punjab, India; The Registrar of Apothecaries' Hall, London; The Secretary of the National Health Society; The Secretary of the Royal Medical-Chirurgical Society; Mr. Chatto, London; Mr. D. Colquhoun, London; The Secretary to the Government of Bengal; Mr. Thomas Thompson, Chelmsford; Dr. Edward I. Sparks, Cornigliano, near Genoa; Messrs. F. Newbery and Sons, London; Mr. Clarence Foster, Leeds; The Secretary to the University of St. Andrews; The Treasurer of the St. Peter's Hospital for Stone, etc.; The Secretary of the National Orthopædic Hospital; The Registrar-General of Edinburgh; The Registrar-General of London; Dr. J. W. Moore, Dublin; Dr. Joseph Rogers, London; The Directors of the Anthropological Institute of Great Britain and Ireland; The Secretary of the Clinical Society of London; The Secretary of the Royal College of Physicians of London; Mr. T. M. Stone, London; Mr. J. Cantlie, London.

APPOINTMENTS FOR THE WEEK.

May 8. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

Royal Institution, 3 p.m. Prof. H. Morley, "The Dramatists before Shakespeare."

10. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

11. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Royal Institution, 3 p.m. Mr. R H. Scott, "Wind and Weather."

Anthropological Institute, 8 p.m. Mr. C. H. E. Carmichael, "Notes on Pre-historic Discoveries in Central Russia." Mr. W. D. Gooch, "Notes on the Occurrence of Stone Implements of the Surface Period in South Russia" Mr. A. Wylie, "Notes on the Western Regions."

Royal Medical and Chirurgical Society, 8½ p.m. Mr. Lawson Tait —1. "Third Case of Extra-uterine Gestation treated by Abdominal Section." 2. "On the Treatment of Pelvic Suppuration by Abdominal Section and Drainage." Mr. Frederick Eve, "On a Case of Sub-coracoid Dislocation of the Humerus without Laceration of the Capsule, etc."

12. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Lister), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.; National Orthopædic, Great Portland-street, 10 a.m.

13. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

Royal Institution, 3 p.m. Prof. Tyndall, "Light as a Mode of Motion: Theories of Light and Colours."

National Health Society (Hertford-street), 4 p.m. Dr. Samuel Wilks, "On Overwork and Underwork."

14. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

Quekett Microscopical Club (University College), 8 p.m. Meeting.

Clinical Society, 8½ p.m. Mr. Barwell, "On Section of the Femur above the Small Trochanter for Angular Anchylosis of the Hip." Dr. Greenhow—1. "On Ten Cases of Rheumatic Fever treated with Salicin"; 2. "On Fifty Cases of Rheumatic Fever treated with Salicylate of Soda." Dr. Graily Hewitt, "On a Case of Acute Hysterical Vomiting of Ten Months' Duration caused by Displacement of the Uterus." Mr. Henry Morris, "On Two Cases of Disease of the Mastoid Bone; in one of which a Severe Attack of Herpes of the Face followed Thrombosis of the Jugular Vein and Lateral Sinus." Dr. Stephen Mackenzie will show a Case of Anterior and Posterior Polio-Myelitis following Small-Pox."

Royal Institution (Council Meeting, 8 p.m.), 9 p.m. Lord Reay, "Certain Aspects of Social Democracy in Germany."

VITAL STATISTICS OF LONDON.

Week ending Saturday, May 1, 1880.

BIRTHS.

Births of Boys, 1302; Girls, 1257; Total, 2559.
Corrected average in the 10 years 1870-79, 2618·5.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	727	660	1387
Average of the ten years 1870-79, corrected to increased population	820·8	766·8	1587·6
Deaths of people aged 80 and upwards ...	...	...	39

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa
West	561359	...	7	3	3	13	...	1	...	4
North ...	751729	12	8	10	...	23	...	2	...	...
Central ...	334369	...	2	2	2	3	...	...	1	1
East	639111	3	2	11	3	13	...	1	...	5
South	967692	3	12	9	7	26	3	4	1	2
Total	3254260	18	31	35	15	78	3	8	2	12

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·983 in.
Mean temperature	44·8°
Highest point of thermometer	58·5°
Lowest point of thermometer	33·1°
Mean dew-point temperature	37·8°
General direction of wind	N.N.E. & N.E.
Whole amount of rain in the week	0·08 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, May 1, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1880.*	Persons to an Acre. (1880.)	Births Registered during the week ending May 1.	Deaths Registered during the week ending May 1.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Centimetres.
London	3664149	48·6	2559	1387	58·5	33·1	44·8	7·12	0·08	0·20
Brighton	107321	45·6	74	29	58·6	36·0	44·2	6·78	0·07	0·18
Portsmouth ...	134224	29·9	78	40	...	...	...	...	...	...
Norwich	85827	11·5	46	36	57·0	37·0	44·6	7·01	0·04	0·10
Plymouth	74993	53·8	53	52	58·3	36·5	46·3	7·95	0·00	0·00
Bristol	213536	48·0	158	74	58·0	32·3	43·0	6·11	0·01	0·03
Wolverhampton ...	75970	22·4	44	21	57·5	29·5	41·6	5·34	0·00	0·00
Birmingham ...	394738	47·0	330	153	...	...	...	...	...	...
Leicester	129912	40·6	84	56	64·5	32·5	44·3	6·84	0·24	0·61
Nottingham ...	173827	17·4	127	93	59·1	31·0	43·9	6·61	0·05	0·13
Liverpool	544056	104·4	424	293	57·7	36·0	44·7	7·06	0·05	0·13
Manchester ...	363130	84·6	235	182	...	...	...	...	...	...
Salford	185786	35·9	123	76	...	...	...	...	...	...
Oldham	115413	24·7	73	57	...	...	...	...	...	...
Bradford	197196	27·3	139	80	53·6	32·0	43·9	6·61	0·21	0·53
Leeds	318929	14·8	243	124	56·0	32·0	44·0	6·67	0·29	0·74
Sheffield	304938	15·5	205	114	65·0	28·0	43·1	6·17	0·09	0·23
Hull	149627	41·2	121	51	61·0	30·0	42·5	5·84	0·29	0·74
Sunderland ...	116730	42·2	94	38	61·0	37·0	46·1	7·84	0·12	0·30
Newcastle-on-Tyne	149366	27·8	113	59	...	...	...	...	...	...
Edinburgh	229839	54·8	191	97	58·6	31·2	45·1	7·28	0·13	0·33
Glasgow	589598	97·7	452	253	59·3	34·5	47·2	8·44	...	...
Dublin	314666	31·3	189	231	62·8	30·8	43·8	6·56	0·02	0·05
Total of 23 Towns in United Kingdom	8633571	39·2	6155	3596	65·0	29·5	44·3	6·84	0·11	0·28

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·99 in. The lowest reading was 29·80 in. at the beginning of the week, and the highest 30·26 in. on Friday morning.

* The figures for the English and Scottish towns (except for Nottingham, Salford, and Oldham) are the numbers enumerated in April, 1871, raised to the middle of 1880 by the addition of nine years and a quarter's increase, calculated at the rate which prevailed between 1861 and 1871. Revised estimates have been adopted for Nottingham, Salford, and Oldham, based upon special returns of inhabited houses existing within those boroughs. the population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

THE LUMLEIAN LECTURES

ON THE

DIGESTIVE FERMENTS AND THE PREPARATION AND USE OF ARTIFICIALLY DIGESTED FOOD.

Delivered before the Royal College of Physicians.

By WILLIAM ROBERTS, M.D., F.R.C.P., F.R.S.,
Physician to the Manchester Royal Infirmary;
Professor of Clinical Medicine to the Owens College.

Lecture II.—Part II.

The Milk-Curdling Ferment.

You all know that one of the most striking properties of gastric juice is to curdle milk. This property is utilised on a large scale in the industrial art of making cheese. Rennet, which has been used for that purpose from remote antiquity, is simply an infusion of the fourth stomach of the calf in brine. The curdling of casein by rennet does not depend upon the acid of the gastric juice, for it takes place when the milk is neutral or even faintly alkaline. It has until lately been believed that this property was an inherent attribute of pepsin, but this opinion is no longer tenable. Brücke succeeded, by a process I need not particularise, in producing pepsin which had an energetic action on proteids, but which did not possess, except in the feeblest degree, the power of curdling milk. Mr. Benger also found that an extract of pig's stomach in saturated brine, while it possessed energetic action as a milk-curdler, had comparatively only feeble proteolytic powers. We must therefore regard the agent in gastric juice which curdles milk as a distinct substance from pepsin.

In the course of my experiments on pancreatic extract, I made the unexpected observation that the pancreas also contained an agent capable of curdling milk. I found this property in the pancreas of the pig, the sheep, the calf, the ox, and the fowl. In whatever way the extract of the gland was made, whatever solvent was used, this property of curdling milk was present in it; but the brine extract exceeded all others in curdling capacity. If a few drops of extract of pancreas be added to some warm milk in a test-tube, the milk becomes a solid coagulum in a few minutes. Some minutes later the whey begins to separate from the curd. In short, the action resembles exactly that of calf's rennet; and, so far as I know, you could make cheese with pancreatic rennet as perfectly as you can with gastric rennet. There is, however, not an absolute identity of the two agents. I said just now that gastric rennet produced curdling in neutral and even in faintly alkaline milk; but if the alkali exceed a very small proportion, ordinary rennet does not curdle milk. I found that an alkalescence exceeding that produced by one grain of bicarbonate of soda to an ounce of milk altogether prevented the milk being curdled by gastric rennet. But this is not so with pancreatic rennet. You may add two, three, or four grains of bicarbonate of soda to each ounce of milk, and still the pancreatic rennet will induce curdling with undiminished energy. Milk is likewise curdled by pancreatic extract when quite neutral, and even when very faintly acid. Indeed, it appeared to me that a very faintly acid milk curdled more actively with pancreatic extract than neutral milk, but not so actively as alkaline milk.

That the curdling agent of the stomach and pancreas is a true ferment, and not some inorganic chemical agent, seems to be proved by the fact that boiling, or even heating to 160° Fahr. (70° C.), instantly destroys its power. I found, moreover, that, like other soluble ferments, it is precipitated, but not truly coagulated, by alcohol, for it recovers its solubility and activity when the alcohol is removed, even after a contact of several weeks.

The curdling ferment of the pancreas is a distinct body from trypsin, as the following experiments show:—1. Some brine extract of pancreas (which was known to possess strong proteolytic energy) was acidulated with hydrochloric acid in the proportion of 1 to 1000, and then placed in the warm chamber at a temperature of 104° Fahr. (40° C.) for a period of three hours. It was then carefully neutralised with bicarbonate of soda. When thus treated, the extract was found to have lost its proteolytic power, but its curdling action on milk was almost as energetic as ever. 2. A portion of the same brine extract of pancreas was filtered under vacuum pressure through porous earthenware. The filtered product was found to possess an undiminished faculty of curdling milk, but it had almost no power of dissolving the curds. The curdling ferment had evidently traversed the earthenware freely, but only traces of trypsin had passed through.

What is the real function of the curdling ferment? Seeing its striking reaction with milk, one's first idea is that it must have something to do with the digestion of casein. But a little consideration shows that this idea is altogether improbable. Although all mammalia start life on a milk diet, milk does not form a part of the normal diet of any adult creature except man. Nor can its universal presence in the mammalian digestive organs be regarded as a vestigial phenomenon—a "memory" of the suckling phase of their existence—for the same curdling property is found in the stomach and pancreas of the fowl, which never at any period of its life fed on milk. Moreover, it may be doubted whether the ferment in question is the actual agent which curdles milk on its passage into the stomach; for the acid of the gastric juice, which also curdles milk, would probably be beforehand with it, inasmuch as its action is a good deal more prompt than that of the ferment. In the pancreatic digestion of milk, the occurrence of curdling has appeared to me to be a distinct hindrance to the process. Has this ferment any true digestive functions? I think this is quite open to doubt. Its action on milk is apparently akin to that of the fibrin-ferment on blood; and it may likewise have some kindred purpose—but what that purpose may be I am unable to conjecture.

Emulsive Ferment.—Digestion of Fats.

The digestive change undergone by fatty matters in the small intestine consists mainly in their reduction into a state of emulsion, or division into infinitely minute particles. In addition to this purely physical change, a small portion undergoes a chemical change, whereby the glycerine and fatty acids are dissociated. The fatty acids thus liberated then combine with the alkaline bases of the bile and pancreatic juice, and form soaps. The main or principal change is undoubtedly an emulsifying process, and nearly all the fat taken up by the lacteals is simply in a state of emulsion, and not of saponification. It is, however, quite certain that both these processes do take place in the small intestine, though in very unequal degrees. The only question in connexion with the digestion of fat which I propose to examine is—Whether these changes are produced by the operation of a soluble ferment, or by some other and different agencies? In his latest utterances on this subject, Bernard(a) insisted that the digestion of fat, like the digestion of starch and proteids, consisted in the action of a soluble ferment, which he named *Ferment emulsif.* This ferment, he alleged, first emulsified and then saponified fats. In the intestine the change scarcely went beyond emulsion. In this condition fat was found in the contents of the lacteals. Saponification took place almost exclusively further on, and later, in the blood. It is certainly established that the pancreatic juice exercises a marked influence on the digestion of fats; and it is in the pancreas, according to Bernard, that the emulsive ferment is to be found. Bernard demonstrated that healthy pancreatic juice has quite a special faculty of emulsifying fats. Pancreatic tissue has also the same property. If a portion of fresh pancreas be rubbed up with fatty matter and water, you get an emulsion which is fairly persistent. I have not had an opportunity of examining the behaviour of pancreatic juice with fatty matter, and cannot therefore speak of its properties; but it is singular if, as alleged, the effect of pancreatic juice and pancreatic tissue on fat be due to the presence of a soluble ferment, that the extracts of pancreas possess none of the same power. I have made extracts of

(a) Claude Bernard, "Leçons sur les Phénomène de la Vie," tome ii., page 346. Paris, 1879.

pancreas in various ways—with simple water, with chloroform-water, with dilute spirit, with solutions of boracic acid, of borax, and of both combined, with glycerine and water, with brine, and with solution of salicylic acid, and of salicylate of soda; and yet I could not satisfy myself that any of these extracts possessed any special power of emulsifying fats, nor of liberating the fatty acids and inducing saponification. Paschutin(b) states that the emulsive ferment of the pancreas can be extracted by a solution of bicarbonate of soda. An extract of pancreas made by myself with a 2 per cent. solution of bicarbonate of soda was indeed found to have a very marked emulsifying power, but it had the same power, even in an enhanced degree, after being boiled—which showed that its emulsifying properties could not depend on the presence of a soluble ferment.

I was equally unsuccessful in my attempts to verify the alleged power of extracts of pancreas, and of crushed pancreatic tissue, to liberate the fatty acids. When fresh pancreas, finely triturated with sand, was digested with milk in the warm chamber, I could not obtain satisfactory evidence of the development of free acid from the decomposition of the fat of the milk by a soluble ferment. The pancreas itself yields a slightly acid solution when infused in water, and a mixture of milk and pancreatic tissue always showed a slight acid reaction; but when this primary acidity was neutralised, no further production of acid took place until such a time had elapsed as was sufficient to permit the development of organised ferments and the origination of the lactic fermentation. If the development of organised ferments was prevented by the addition of antiseptics, such as chloroform or a combination of boracic acid and borax, a mixture of milk and crushed pancreas remained neutral for several days. The same results followed when I operated on emulsions made with crushed pancreas and lard or olive oil. In my numerous observations on the digestion of milk with various pancreatic extracts, I never could detect the production of an acid reaction unless organised ferments were permitted to intervene.

I obtained similar negative results with almond emulsion. Bernard attributed the formation of an emulsion when almonds (or other oily seeds) were rubbed up with water to the presence in the seeds of a soluble ferment. But I found, to my surprise, that almonds which had been boiled for seven hours still produced a perfect emulsion. As all know soluble ferments are destroyed by boiling, this result seems irreconcilable with Bernard's view. I also found that almond emulsion kept in the warm chamber for six or eight hours at a temperature of 100° Fahr. (38° C.) showed not the slightest evidence of an increase of its original faintly acid reaction. It appeared to be more probable that the fatty matter in the almond existed in the seed in the condition of a solid emulsion, and that the formation of a fluid emulsion by trituration with water was due simply to the liberation of the minutely divided oil particles, rather than to the intervention of a soluble ferment.

It is with considerable hesitation that I venture to place myself even in apparent contradiction with so great an observer as was Claude Bernard; and I by no means pretend that these observations traverse the main conclusions for which he contended as to the digestive transformations of fat in plants and animals. The views which Bernard developed on the digestive process are based on inductions so wide, and observations so multiplied, that I feel satisfied that their substantial accuracy will be ultimately established in regard to fat, as they have already been established in regard to starch and cane-sugar.

Some observations made by Brücke promise to throw a fresh light on the digestion of fat. Brücke found that oils and fats which contained an admixture of free fatty acids—in other words, which were more or less rancid—were emulsified by a slight agitation with a weak solution of carbonate of soda. J. Gad extended these observations, and showed that even simple contact of a rancid oil with the alkaline solution was sufficient to effect a mechanical division of the oily matter. I have repeated these observations, and the results are certainly remarkable. The different behaviour of two specimens of the same oil, one perfectly neutral and the other containing a little free fatty acid, is exceedingly striking. I have here before me two specimens of cod-liver oil—one of them is a fine and pure pale oil, such as is usually dispensed by the better class of chemists; the other is the brown oil sent out under the name of De Jongh. I put a few drops of each of these into these two beakers, and pour on them some of this solution, which contains 2 per cent. of bicarbonate of soda. The pale oil, you see, is not in the least emulsified; it rises to the top of the water in large clear globules: the brown oil, on the contrary, yields at once a milky emulsion. The pale oil is a neutral oil, and yields no acid to water when agitated with it—in other words, it is quite free from rancidity; but the brown oil, when treated in the same way, causes the water with which it is shaken to redden litmus paper. I was surprised to find that olive oil (salad oil), which appeared quite sweet, and had not the slightest taste or smell of rancidity, gave a milky emulsion with the soda solution. This oil did not yield any acid reaction to water when agitated therewith. Nevertheless, it evidently contained a little free fatty acid (probably oleic acid, which is insoluble in water, and therefore does not acidify water shaken up with it), for when a portion of this oil was washed with a strong solution of carbonate of soda, and then allowed to separate, the oil thus freed from acid no longer gave an emulsion with the weak soda solution. It would appear that an admixture of only a very small proportion of free fatty acid is sufficient to induce emulsification—a quantity so small as not to cause any appreciable rancidity to the senses of smell or taste. This specimen of almond oil is to all appearance perfectly sweet, but it communicates a rather sharp acid reaction to water shaken up with it, and it gives, as you see, an instantaneous and perfect emulsion with the soda solution.

The bearing of these observations on the digestion of fat is plain. When the contents of the stomach pass the pylorus they encounter the bile and pancreatic juice, which are alkaline from the presence in them of carbonate of soda. So that the fatty ingredients of the chyme, if they only contain a small admixture of free fatty acids, are at once placed in favourable circumstances for the production of an emulsion without the help of any soluble ferment, the mere agitation of the contents of the bowel by the peristaltic action being sufficient to effect the purpose.

This view of the matter renders it necessary that fresh inquiries should be made into the effect of gastric digestion on fats. It has hitherto been supposed that fatty and oily substances undergo no change in the stomach, but it is quite possible that something may have been overlooked. It was noted by Richet in the patient with a gastric fistula that the fatty matters were detained a long time in the stomach, and that they only passed through the pylorus with the last portions of the meal. It is also a familar experience to most dyspeptics that rancid eructations are a frequent occurrence in the later stages of gastric digestion. If it should turn out that among the complex operations taking place in the stomach there occurred some slight decomposition of the neutral fats, and a liberation of a small quantity of free fatty acid, such a result would supply the necessary condition for the emulsification of the neutral fats in the duodenum. In speculating on this subject it is difficult to shut one's eyes to the possibility of the intervention of formed or organised ferments in the digestive process. It is well known that fatty acids are liberated in the decomposition of neutral fats by bacterioid ferments (zymophytes), and the presence of ferments of this class in the living stomach has been so repeatedly observed that it may well give rise to the suspicion that they are a normal ingredient of the gastric mucus, and have a normal function to perform in the digestion of some portions of our food. It is not, however, desirable to push speculations of this kind in advance of observed facts, and I only mention them as hints for further inquiry in regard to the digestion of fat.

(b) Hoppe-Seyler, "Physiologische Chemie," page 257. Berlin, 1878.

Sydney Exhibition.—Amongst the highest awards just announced, the name of Messrs. John Richardson and Co., manufacturing chemists, of Leicester, occurs as having gained a gold medal. The exhibits for which this high distinction has been obtained consist of pure chemicals for medicinal use, and a large variety of pharmaceutical and pharmacopœial preparations, very elegant and compact medicine-chests for colonists and emigrants, and emergency cases for colonial surgeons. The firm also exhibited their pure thymol soap, the new and valuable disinfectant introduced by them last year. This is the fourth medal obtained by Messrs. Richardson and Co.

CROONIAN LECTURES.

ON SOME POINTS IN THE PATHOLOGY AND TREATMENT OF TYPHOID FEVER.

Delivered at the Royal College of Physicians of London.

By WM. CAYLEY, M.D., F.R.C.P.,
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LECTURE III.

(*Concluded from page* 501.)

ANOTHER abdominal symptom remains to be considered in relation to the bathing, viz., tympanites. When great, not only is it in itself a cause of much distress and even danger, but it indicates either very severe nervous depression or serious local lesions. The actual cause of the condition is, no doubt, paralysis or loss of tone of the muscular coat of the intestine. Sometimes it comes on early, before the middle of the second week, and is then a most ominous symptom, and is an indication of a profound shock to the nervous system. This early tympanites is, I believe, most beneficially influenced by reducing the temperature by bathing and cold compresses, together with free stimulation. The tympanites of the later stages of the fever is often due, in addition to the local lesions, either to actual peritonitis, or, at any rate, extensive and deep intestinal ulceration, and, as well as the local application of cold to the surface of the belly, demands the free use of opium. I cannot say I have ever seen much advantage result from the remedies usually recommended for this affection, such as charcoal to condense the gas, or stimulating enemas to expel it. The latter sometimes give temporary relief, but unless the tone of the intestinal wall be restored the gas soon re-accumulates. Attempts to draw off the gas by introducing a tube into the rectum only occasionally succeed. In order to do so, the tube must be passed quite into the sigmoid flexure—no easy matter to accomplish,—and moreover the gas is often contained in the small intestine.

Seeing how little influence the antipyretic treatment appears to exercise on the typhoid lesion of the intestine, when, as is so often the case, it is deferred till the end of a week or more, it becomes a matter of great importance to recognise as early as possible those cases in which the primary infiltration has gone very deep, and where in consequence there is danger of arterial hæmorrhage or perforation taking place when the sloughs separate, for probably the best chance of preventing these accidents is to arrest as far as possible the peristaltic movements at this period of the disease by means of opium. Unfortunately we have no signs on which we can rely with any certainty. It has been said that twitching of the muscles indicates severe intestinal lesions, but this does not accord with my own observation. In a large proportion of the cases of perforation which I have seen, this sign has been absent; and from my limited experience of typhus I should say that muscular twitchings were much more common in this disease where there is no ulceration. On the whole, I think that great tympanites is the most valuable indication which we possess of this condition.

Another point of interest in connexion with cold bathing is the effect on the kidneys. Dr. George Johnson has shown that prolonged cold bathing will often induce a temporary albuminuria in healthy persons; it might therefore be anticipated that, in a disease like typhoid, the severer forms of which are so often attended by albuminuria, repeated cold baths would tend very much to increase the frequency and danger of this complication. Such, however, does not appear to be the case, and none of those who have extensively employed this mode of treatment have found any increased frequency of the rare complication in typhoid—acute nephritis. One such a case occurred this year in the London Fever Hospital, but this patient had never been bathed.

A case of acute nephritis and uræmia in typhoid fever was admitted last winter into the Middlesex Hospital under the care of Dr. Greenhow, but neither had this patient been bathed; and two similar cases have been reported by Professor Immermann as occurring in the hospital at Basle, but in both these the affection was already present on the, patient's admission. Hence, albuminuria need not, I think, be regarded as a contra-indication.

Another point of great interest is the effect of the treatment on relapses, and I think it cannot be doubted but that relapses are rendered more frequent. The probable causes of this I have already considered. In order to prevent these relapses, Professor Immermann has tried the effect of salicylate of soda, and he gives four to six doses of fifteen grains daily for ten or twelve days from the time of complete defervescence. Of fifty-one patients treated in this manner, only two relapsed, giving a ratio of less than 4 per cent., while of 234 patients treated at the same time and under similar conditions, but without the salicylate, thirty-three relapsed, giving a proportion of 20 per cent.

His paper has come into my hands too recently to enable me to try this mode of treatment on more than a few cases, but so far some of them have relapsed.

Against the general adoption of this mode of treatment it has been objected that in the great majority of cases it is unnecessary; that upwards of 80 per cent. of the cases, if properly fed and nursed, will recover; and that therefore so troublesome and even distressing method ought to be reserved for the comparatively few cases which are likely to end fatally. This argument is not without force, and no doubt a large number of the milder cases do not need repeated bathing; but it is notoriously impossible to predict at the outset, with any certainty, the course of an attack of typhoid fever, and any delay in commencing the treatment deprives it of a large part of its efficacy. A mild case of typhoid, or any feverish attack of which the diagnosis is at first doubtful, should from the outset be treated on the same principles, though in a less rigorous manner.

The patient should be confined to bed in a cool room with thorough ventilation and be only lightly covered, and from time to time may be sponged with cold water or have a cold affusion. Most persons in the upper and middle classes are accustomed to have a cold sponging or a cold affusion daily, and if they are feverish this will be still more grateful to their feelings; at the same time, abundance of cold drinks should be given to quench thirst and keep the mouth moist. If the case should prove to be one of febricula or simple catarrhal fever, no harm, but rather good, is done; if it turn out to be typhoid, we shall have obtained control over the fever from the first, and as soon as the temperature, in spite of these milder means of refrigeration, begins to maintain itself above 102°, and signs of febrile oppression manifest themselves, we can have recourse to the more energetic means of reducing it.

We have now to bring this mode of treatment to the test of statistics, and to inquire what is the effect on the general rate of mortality. First we must endeavour to compare together like instances, and this we are enabled to do pretty satisfactorily by contrasting the rate of mortality in the same hospitals before and after its introduction.

Thus, in the hospital at Basle, of 1718 patients treated on the expectant plan, 469 died, giving a mortality of 27·3 per cent. Of 982 patients treated partially on the antipyretic system, 159 died, giving a mortality of 16·2 per cent. Of 1483 cases treated thoroughly in this way, 130 died, giving a rate of 8·8 per cent.

In the hospital at Kiel, of 330 patients treated on the expectant plan, 51 died, giving a mortality of 15·4 per cent. Of 160 cases treated by Jurgensen by cold baths, 5 died, giving a mortality of 3·1 per cent.

In the military lazaretto at Stettin, of 1591 cases treated before the introduction of bathing, 405 died, giving a mortality of 25·6 per cent.; since, of 121 cases, 5 have died, giving a rate of little more than 4 per cent.

Similar results have been obtained at Zurich.

Perhaps the most striking results of this mode of treatment were obtained in the field-hospitals during the Franco-German war, which show a difference in the mortality between the ordinary and the antipyretic treatment of between 20 and 40 per cent. for the former, and 3 or 4 to 12 per cent. for the latter. It is interesting to compare with these numbers the rate of mortality in the English Army on home service in times of peace.

If we now take the general results as given by Dr. Brand we find that of 8141 cases treated antipyretically, 600 died, giving a mortality of 7·4 per cent., while the average rate

in hospitals under the ordinary treatment is certainly not less than 16 per cent.

One result of this is, that while formerly the rate of mortality in the English hospitals was decidedly lower than that in the German hospitals—a result which we were disposed to ascribe to our better sanitary arrangements, better nursing, better feeding, and more free stimulation,—it is now more than double.

I think, therefore, that it is impossible to doubt but that this mode of treatment considerably diminishes the rate of mortality.

I will now give briefly my own experience of this mode of treatment, which, however, in itself has been too limited to justify me in drawing any positive statistical conclusions, though it has been sufficient to convince me of its great advantages. At first I confess I was prejudiced against it,—not that I ever doubted that it was advantageous to reduce the temperature in fever, but I regarded this repeated cold bathing as in itself impracticable, and moreover an unnecessarily severe proceeding. I therefore proceeded very tentatively, at first only giving a bath occasionally when the temperature was very high and the symptoms severe. Seeing the good effects which often followed, I gradually administered the baths more frequently, and supplemented them by quinine and salicylate of soda and the other means of reducing the temperature; but it is only quite recently that I have endeavoured systematically to keep the temperature below 102·2°, and I have rather followed Liebermeister than Brand in the free use of quinine and the other antipyretic remedies, and have moreover largely supplemented the baths by sponging with iced water, cold packing, and ice compresses.

Including all cases—viz., those which were only bathed occasionally, as well as those in which the method was more thoroughly carried out—I have treated 120 patients, of whom eighteen have died, giving a mortality of 15 per cent. This is not much below the average mortality, during the last decade, of the London Fever Hospital in London: but it must be remembered that these were all severe cases, while the general rate of mortality is reckoned on the mild and severe cases together; therefore the results are really very favourable.

Of these 120 cases, forty were treated systematically by applying remedies to reduce the temperature whenever it maintained itself above 102° to 103° in the axilla. In the earlier cases the higher maximum was taken; in the later cases, the lower. The means employed were cold baths, cold sponging, cold packing, cold compresses, quinine (usually in thirty-grain doses), salicylate of soda in sixty-grain doses, and sometimes digitalis. With the exception of one fatal case I have excluded from this list all cases where less than ten baths or equivalent modes or methods were administered. The largest number of baths given in any case was sixty-four.

All these cases were of great severity, and in some the condition was almost desperate when the treatment was commenced. Four deaths took place, giving a mortality of 10 per cent. Of these four fatal cases, in one, a patient in the Middlesex Hospital, the treatment was not begun till the eighteenth day; the patient was then in a state of great prostration, with delirium, stupor, and hypostatic pneumonia. She had thirty-eight baths.

The second case, treated in the London Fever Hospital, was a woman aged twenty-nine. The treatment was commenced on the tenth day. She had fifteen baths, was cold-sponged fifteen times, and had nineteen thirty-grain doses of quinine. She recovered from the primary attack, relapsed, and died on the forty-second day. During the relapse she was only bathed once.

The third case, also treated in the London Fever Hospital, was a youth aged eighteen. The treatment was commenced on the eleventh day. Number of baths, eleven. Quinine given fifteen times. He was apparently progressing favourably. His temperature had fallen, and no bath had been given for two days, when he was suddenly seized with a violent attack of tetanic spasms with opisthotonus, after which his temperature again rose and his urine became bloody. He died of asthenia on the twenty-fifth day. After the attack of convulsions he was not again bathed.

The fourth case I have already mentioned in a former lecture. The patient died, on the fourteenth day of the disease, of acute granular degeneration of the heart. She got out of bed in the middle of the night and fell dead on the floor. She had only been bathed eight times, as her temperature was never very high.

Of the fourteen deaths which occurred among patients in whom the treatment had only partially been carried out, in eleven cases it was not commenced till after the eleventh day of the disease, and in seven of these not till after the fourteenth. In five cases only one or two baths were given, and the treatment therefore could not be considered to have been tried.

One case was admitted with acute meningitis and maniacal delirium, and died within thirty hours, and the surface of his brain was found covered with lymph. Three cases died of peritonitis, in two of which there was perforation; of these one died in a relapse, during which he was not bathed. One case died of hæmorrhage. One was the subject of valvular disease of the heart, of pericarditis, and pleurisy; in this latter case the treatment was not commenced till the twenty-ninth day of the disease, and he was only bathed on two occasions when the temperature became very high.

The remaining cases died of asthenia and hypostatic congestion of the lungs. No patient has died in whom the treatment was commenced before the eighth day, and only two in whom it was commenced before the tenth. Of the whole number of 120 cases, thirteen, or 10 per cent., relapsed; one relapsed twice. Of the forty cases systematically treated, five relapsed; four of the thirteen relapses proved fatal.

I may add that last year, in which the treatment by bathing, though still only partially, was more completely carried out than in any previous year, the rate of mortality in the London Fever Hospital has been lower than has occurred since the exclusion of the pauper patients.

In conclusion, I trust I have brought forward sufficient evidence—not indeed to convince my hearers of the superiority of this mode of treatment—but enough to show that it is deserving of a fair trial, by the results of which it must stand or fall. Its objects all will acknowledge to be rational, and the means, when judiciously applied, are free from danger. Moreover, we may claim in its favour the weight of authority; and though we may not say in medicine, "Errare malo cum Platone quam cum aliis vera sentire," nevertheless, when we follow Currie, Gregory, Giannini, Horn, Chomel, Graves, Trousseau, Traube, Liebermeister, Brand, Jürgensen, Binz, von Ziemssen, Wunderlich, Chavanne, Cayla, we may feel some assurance that we are not wandering far from the right track. And I think it can hardly be doubted but that we have here a potent weapon, originally indeed forged in this country by a skilful artificer, but allowed to get rusty from disuse; but which, again sharpened and polished by the great physician of Stettin, has been restored to our hands—a weapon, by whose aid we may well hope that we shall succeed in saving a considerable proportion of those 8000 victims who every year in England alone succumb to the attacks of this treacherous disease.

CASTS IN THE URINE.—Dr. Tyson, Professor of General Pathology and Morbid Anatomy in the University of Pennsylvania, terminates a paper upon the Clinical Significance of Casts of the Uriniferous Tubules with the following conclusions:—1. Hyaline casts are found in all forms of Bright's disease, as well as in temporary congestion of the kidney, active or passive. 2. Epithelial casts are found in acute, subacute, and chronic parenchymatous nephritis. In the latter two forms the cells are generally degenerated and fragmentary. 3. Blood-casts are found in acute parenchymatous nephritis, and where hæmorrhages have occurred in the kidneys. 4. Pale granular casts are found in interstitial nephritis (contracted kidney) and in parenchymatous nephritis. 5. Dark granular casts are found in parenchymatous nephritis, acute and chronic, and rarely in interstitial nephritis. 6. Waxy casts are found only in chronic Bright's disease, and attend either of the three principal forms. 7. Oil casts are found in subacute and chronic forms of Bright's disease, and may attend any of the three principal forms, but are most numerous in chronic parenchymatous nephritis (fatty kidney). 8. Free fatty cells and free oil drops are found in chronic parenchymatous nephritis. 9. The form of fatty cell known as the compound granular cell is found in acute and chronic parenchymatous nephritis.—*Phil. Med. Times*, March 13.

ORIGINAL COMMUNICATIONS.

TWO CASES IN WHICH PURPURIC ERYTHEMATOUS ERUPTIONS WERE PRESENT.

By ALFRED SANGSTER, M.B.,
Physician to the Skin Department, Charing-cross Hospital.

Case 1.—Purpuric Mottled Eruption, Symmetrically Distributed—Vesication, Superficial Gangrene, etc.

Mary E., aged five years, was admitted January 3, 1880, into Charing-cross Hospital, under Dr. Green. It seemed from what the mother stated that the patient had had a light attack of scarlet fever, and soon afterwards (about fifteen months before time of admission) she complained of pain and loss of power in her legs. Then "dark marks came out all over her," especially on the arms and legs, backs of hands, and insteps. This all subsided and she got quite well. Last July she was in one of the metropolitan hospitals with symptoms similar to those just mentioned. The mother used the term "mottling" in connexion with the eruption which was present. The child was again attacked last Boxing-day, and it was for this that she was now admitted to Charing-cross Hospital.

On January 28, Dr. Green kindly handed the case over to me, when the following condition was noted:—The patient has a hydræmic, waxy look; the arms, and especially the backs of forearms, present a coarse mottling, similar in pattern to that of *ephelis ab igne*. The eruption might be described as a purpuric erythema, for it slightly fades on pressure, leaving livid staining. The backs of the hands are affected, the eruption being most marked over the metacarpal bone of first finger. A similar condition, slighter in degree, is noticeable over both cheeks. The same mottling is traceable, although but faintly, over the legs and thighs; it is, however, well marked over both insteps. In patches, following a serpiginous pattern on the forearms, and in connexion with the mottling, there are thin paper-like crusts, such as follow partial vesication; in places they are dark in colour, as though the vesication had been accompanied by a hæmorrhagic condition. There are similar crusts about the helix of left ear. Over the right elbow is a dusky, greenish-yellow patch, irregular in outline, about an inch and a half in its longest measurement. It is bounded by a narrow pinkish desquamating border, serpiginous in outline, abruptly raised towards the enclosed area, but shelving towards the surrounding surface. On the left elbow is a similar but smaller patch.

About ten days ago the patient complained of pain in the index-finger of left hand; it was quite livid and cold at the time; in fact, had all the appearance of threatened gangrene. It was wrapped in cotton-wool, and in two or three days the pain subsided. The finger has now regained its normal appearance, except that there is a hæmorrhagic vesication about the size of a threepenny-piece over the pulp of the terminal phalanx, such as is often seen as the result of bruise. Poultices were applied to the patches over the elbows, which separated *en masse*, leaving a healthy granulating surface, finally healing with superficial loss of substance.

There was nothing discovered in the patient's condition to throw any direct light upon the cause of this curious affection. Handling the limbs seemed to cause pain. There was no swelling of the joints nor any pitting on pressure.

The urine contained no albumen. The temperature was 102·8° on admission, but fell the next day to 101°; by the end of the first week in hospital it had reached the normal point; then for three weeks it ranged irregularly, with evening exacerbations, between the normal and 102°; afterwards, for the rest of her stay in hospital, it continued normal.

The patient rapidly improved whilst taking quinine and iron, and left the hospital nearly well. The mottling was still faintly traceable outside the forearms.

It was suggested at first that the disease was purpura hæmorrhagica, but the symmetry and character of the eruption negatived this supposition; moreover, there was no hæmorrhage from the mucous membranes, as far as could be ascertained. The case was presumably a somewhat unusual form of polymorphic erythema; its relapsing character supported this, as well as its distribution (insteps, backs of hands and forearms, face, ears). As the name implies, there is the greatest diversity in the eruption in this affection, not only as to form (E. papulatum, E. annulare, etc.); but, according to the degree of inflammation present, there may be vesication of a more or less severe type (Herpes iris, Hydroa). In many cases there is a marked tendency for the eruption to become hæmorrhagic. In some, apparently connected with the extent of skin affected, there are febrile symptoms. The mottled character of eruption in this instance was, as far as the writer's experience goes, somewhat unusual. In explanation of the phenomenon of "mottling," it seems to be due to the fact that, after the subsidence of a general capillary congestion, there are areas of capillary vessels, regulated by the anatomy of the vascular system, which remain permanently dilated. The mottling which occurs on the legs and other exposed parts of children is familiar to all. It may be suggested that it is due to cold, under the influence of which the capillaries are repeatedly becoming congested, leading to the permanent dilatation of the vessels in certain capillary areas which remain visible. Again, the phenomenon of *ephelis ab igne* apparently depends on similar causes. The capillary system is congested, and on its subsidence there is traceable, in association with capillary areas, the staining due to blood-changes. Just such a condition of blood-changes, arranged in a mottled pattern, was present in the above narrated case; and it is interesting to note that some of the parts affected were those in which stagnation of blood in the capillary system is of comparatively frequent occurrence (*e.g.*, face, backs of the hands, ears). The localisation of the superficial gangrenous patches is difficult to account for. The skin over the elbows may often be noticed to be cold and passively congested, and its low vitality may account for its small resisting power in this as in other skin affections. There is a very interesting account in the Catalogue of Skin Models at Guy's Hospital, by Dr. Fagge (page 225), of a case entitled "Circumscribed Gangrene of the Skin." From the description, the patches presented a quite similar appearance to those seen in the case described above; they occurred on the knees especially. There were purpuric patches elsewhere, but no condition like polymorphic erythema seems to have been present. The patient died, and post-mortem there was found "tubercular disease of both lungs and ulceration of the intestines (principally of cæcum)."

I am indebted to Dr. Silver for permission to make use of the following case:—

Case 2.—Purpuric Erythematous Spots, with Pain and Swelling of Joints—Purpura (Peliosis) Rheumatica.

W. W., aged seven, a thin, anæmic-looking little lad, first came to the out-patient department under my care, February 6, 1879. His mother stated that he ate very little meat or green vegetables, and but rarely went out of doors. For some time he has complained of pain in the joints, which towards night become swollen; the swelling, however, subsides in the morning, and he gets about and seems well during the day.

On stripping the patient there was a purpuric erythematous eruption, partly macular, partly papular, chiefly distributed over the buttocks, thighs, and legs; in this situation the spots seemed limited by the boot-top. Pigmentary changes were traceable, some of the spots appearing as mere yellow stains. There was also noticed a peculiar diffuse, bruise-like, yellow discolouration over both elbow-joints, back and front, and a tendency to the same was remarked over the right instep. This bruise-like condition suggested injury, but on inquiry it was not admitted.

The patient subsequently entered the hospital under Dr. Silver. The following notes are extracted from the report of the case by Dr. Robert Smith:—At the end of a week the patient complained of pain in the right wrist. Next day it was swollen, the parts about being somewhat œdematous, but there was no evidence that there was effusion within the synovial membrane. A few purpuric spots (similar to those above described) now presented themselves over the joint, and soon began to fade. The right elbow in a day or two was affected in exactly the same way as the wrist

had been—viz., first with pain, then with puffiness, and lastly with purpuric spots. The left ankle was next affected in precisely the same manner. All this time the child was healthy, and even lively; there was no rise of temperature throughout; on no occasion was the joint-pain severe.

The patient's blood on examination under the microscope showed a great increase of white corpuscles, but the most marked change was in the size of the latter, which appeared three times their normal magnitude. The red corpuscles were pale and crenated. The urine contained no albumen; was of natural colour; specific gravity 1016; no deposit on standing. No blood-corpuscles were detected in it, and no colouring matter of the blood on applying the ozonic ether and guaiacum test. The patient left the hospital before he was well, at the desire of his friends. It is curious to note that in the description of purpura rheumatica in Professor Hebra's work the disease is spoken of as never seen in children or very old persons.

The case above described goes to support the view that the so-called purpura rheumatica is not, indeed, a true rheumatic affection. Neither the joint affection nor the patient's general condition were those of rheumatism. It has been suggested that purpura rheumatica is only a specialised form of erythema multiforme, through erythema nodosum; in the latter affection joint complications are sometimes seen, while blood-changes are so common as to have given rise to the name it sometimes goes by—viz., "dermatitis contusiformis." Lastly, the boundary line between erythema nodosum and the other erythemata (E. papulatum, etc.), which together make up Hebra's polymorphic erythema, is exceedingly difficult to draw. (For an account of the various opinions held concerning the nature of so-called purpura rheumatica, see Liveing's "Handbook of Diagnosis of Skin Diseases," page 138.)

NOTES OF A CASE OF

SUDDEN DEATH FROM ACCIDENTAL HÆMORRHAGE.

By WM. JOHN SMITH, L.R.C.P., L.R.C.S. Edin., L.S.A.

Ann Maria C., aged twenty-nine years, was expecting her fourth confinement in two or three weeks. On Friday evening, the 16th ult., she was hanging her bedroom window-blind (about half-past eight o'clock), to do which she had opened the window a little way to stand upon the window-frame. Whilst reaching up, her feet slipped, and she fell with one leg outside, and the other inside the bedroom, and then into the room. She immediately began to flood. Her husband came in shortly afterwards, and at once fetched a neighbour, and then came to my house. I was out, as also was my assistant. He came to us, and we both immediately went to the case, my assistant arriving about two minutes before me, having run all the way. When I arrived I found the room-floor covered with blood, evidently diluted with the liquor amnii, the patient being quite pulseless and in an advanced state of collapse. My assistant administered stimulants whilst I plugged the vagina, after digital examination, and finding the os firmly closed. Having done this (which stopped all bleeding), we carefully moved my patient on to a thick hearthrug (being careful to keep the horizontal position), and covered her up with blankets, still persevering with stimulants; but she quickly sank, and died about 9.40, fifteen or twenty minutes after my arrival, and little more than an hour after the accident. I then carefully listened over the abdomen, but could hear nothing of the fœtal heart, and consequently concluded that the child was dead. I went direct to the police-office and gave the case into the hands of the officer in charge, who made full inquiries of every one present (some eight or nine women who had had large families), and reported to the coroner, who gave an order for burial. Being perfectly satisfied with the conduct of the whole case, he did not consider an inquest necessary. Unfortunately there was no post-mortem examination; had there been, I have no doubt the placenta would have been found detached—which would account for all the symptoms described, and also for the previous death of the child.

Parkgate, Rotherham.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

CHARING-CROSS HOSPITAL.

CASE OF VERY PROFUSE HÆMOPTYSIS.

(Under the care of Dr. SILVER.)

[For the following notes we are indebted to Mr. C. G. Bunn, Resident Medical Officer.]

The interest of the following case consists in the very profuse hæmoptysis which occurred while the patient was under observation.

V. O., a man aged forty-three, was admitted on March 16 of present year. Patient was the keeper of a lodging-house, and he was known to have been a hard drinker. For two or three years he had had symptoms pointing to phthisis. He was too ill during his stay in hospital to give a complete account of his previous history. It would appear, however, that he had not had any noticeable hæmorrhage from the lungs until March 13. He was then suffering rather more than usual from cough, and began to bring up a little blood when he expectorated.

March 16.—At 2 a.m. patient was brought to hospital with quite a blanched appearance. His friends stated he had an hour or two before brought up suddenly about a "pint" of blood. He still continued to bring up blood, and was at once admitted. About 6 a.m. he suddenly coughed up twenty ounces of bright-coloured blood. About an hour later, after feeling sick, he vomited twenty ounces of coffee-ground fluid. He continued coughing and spitting blood all that day.

19th.—After the 16th, the hæmoptysis gradually ceased, but at 1 a.m. this morning he again suddenly brought up ten ounces of blood of a bright colour. At 1.45 a.m. he had well-marked rigor lasting twenty-five minutes; during this rigor the temperature went up to 103·4°, and shortly afterwards to 106°; perspiration followed, and temperature fell.

22nd.—Patient this morning again brought up suddenly ten ounces of bright-coloured blood.

23rd.—Another attack of hæmoptysis to extent of ten ounces.

24th.—Had another attack to-day, about six ounces being brought up.

25th.—At eleven this morning patient lost eight ounces, and during the afternoon he had two other attacks, losing twenty-two ounces; still later this evening he had a fourth attack of hæmoptysis, losing twelve ounces.

26th.—Patient had an attack this evening, losing fifteen ounces.

30th.—Another attack of hæmoptysis came on to-day; about six ounces of fluid blood escaped. The House-Physician was hurriedly called to the patient, and found a large blood-clot in his mouth and throat, which he at once removed. The patient died a few minutes afterwards.

At the post-mortem examination there was found, according to expectation, extensive excavation of the upper lobe of the left lung. There was one large cavity partially divided into two, and there was another smaller cavity. In both cavities aneurismal dilatations were found on the exposed bloodvessels. The bronchial tubes of both lungs were more or less blood-stained; some considerable blood-clot being present in places, having evidently resulted from the inhalation of blood. The liver was cirrhotic; the other organs were pale and bloodless.

Remarks.—The chief point of interest in above case is the immense quantity of blood brought up by patient while under observation. It will be seen that within the fortnight he lost 140 ounces of blood in addition to the "pint" brought up before admission; moreover, during that period he was constantly expectorating slight quantities not included in the above calculation. Repeated and profuse hæmorrhage at short intervals would seem to be characteristic of miliary aneurisms, whether in a lung-cavity or in the floor of a gastric ulcer. It is needless to remark that the treatment included the use of all the ordinary means for the arrest of hæmorrhage.

CASE OF CEREBRAL HÆMORRHAGE.

(Under the care of Dr. POLLOCK.)

A woman, M. L., aged thirty-three, a cook, was admitted into Charing-cross Hospital, under the care of Dr. Pollock, suffering from symptoms of cerebral hæmorrhage. It appeared that on the day before admission, the patient, who up to that time had enjoyed excellent health, was sitting before the fire, when she suddenly complained of pain in her head. She fell off the chair, and when picked up was found to have lost the use of her right side, including the arm and leg. She was conscious, and complained of being blind. Articulation was difficult, and her mouth was drawn to the left side. She remained conscious up to the morning of the following day—continuing, however, blind; after this she became unconscious, and was brought to the hospital about seven in the evening.

On admission, the patient was unconscious. The pupils were dilated and equal—they responded to light, but the conjunctiva was insensible. Her face was not drawn to either side; but the right arm and leg were evidently paralysed. Breathing shortly after admission became stertorous. Temperature when patient was first brought to the hospital was 99° Fahr., and afterwards rose to 106·4° Fahr. at 11.30 p.m., when she died.

Post-mortem Examination (May 3).—The body was that of a well-developed and well-nourished woman. There was much hypostatic lividity about the neck and posterior aspect of the trunk and limbs. Rigor mortis was well marked. The pericardium was adherent over the heart, the adhesions easily breaking down. The heart was enlarged, the enlargement being chiefly in the left ventricle; its consistence was firm, and it was pale in colour. The valves were all healthy. There was a good deal of soft blood-clot in the right side. The liver was pale, rather large, and of normal consistency—weight fifty-seven ounces and a half. The kidneys appeared rather larger than normal—joint weight eleven ounces. Their capsules were slightly thickened and at places adherent to the cortex of the organs, their general appearance suggesting that they had possibly been large white kidneys which were undergoing fibrous change. No microscopic examination was made. The brain presented much engorgement of the venous channels over the whole surface. All along the base there was a thin layer of blood-clot spread out under the arachnoid. The clot was thickest over the surface of the pons and round the medulla; but it also extended forward over the circle of Willis and along each of the Sylvian fissures. There was no lesion found in any part of the brain-substance, and the lateral ventricles were free from blood; the right contained a very small quantity of blood-stained serum. No rupture of any large vessel was detected, and the arteries at the base of the brain were all healthy.

The rarity of fatal cerebral hæmorrhage in so young a patient makes the case of some interest.

TEN CONSECUTIVE BREECH PRESENTATIONS IN THE SAME WOMAN.—Dr. R. Winslow relates the case of a coloured woman, thirty-one years of age, to whom he was called in her tenth labour, with a breech (her tenth) presentation. He found that the head would not pass through the superior strait on account of great shortening of the antero-posterior diameter, caused by undue projection of the promontory of the sacrum, the occiput being lodged upon this projection with the chin hooked over the pubis. The position could not be altered, but delivery was at last accomplished by means of Hodge's long forceps, and the employment of much force. The child was well developed, but not unusually large, and at the back of the head was a deep furrow caused by dragging it over the sacral projection. "The labours of this woman afford striking examples of the conservation of nature in performing naturally what, under other circumstances, becomes a difficult and dangerous operation—version, which sometimes succeeds in cases in which the superior strait is narrowed, even after the forceps has been applied in vain. She was thus delivered naturally eight out of ten times. Nine children lost out of ten is a terrible sacrifice of life, and I doubt not that the result would have been different if premature labour had been induced at the beginning of the seventh month, and the danger to the mother would have been lessened at the same time."—*Amer. Jour. Med. Sciences*, April.

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Medical Times and Gazette.

SATURDAY, MAY 15, 1880.

THE EPSOM COLLEGE CASE.

THIS case, commonly known as the case of Howell *v.* West and Jones, must be so fresh in the minds of our readers that there can be no need for our going again into the particulars of it. Tried first in the Queen's Bench Division of the High Court of Justice, before the Lord Chief Justice of England, a verdict was returned on all points in favour of the defendants; and the Lord Chief Justice, being fully satisfied with the findings of the jury, entered a verdict for the defendants, and gave judgment in their favour. The plaintiff then applied in the same Court for a new trial, but the Court, consisting of three judges (the Lord Chief Justice, Mr. Justice Field, and Mr. Justice Manisty), unanimously refused the application. The plaintiff, still dissatisfied, appealed from that refusal to the Court of Appeal of the Supreme Court of Judicature, where Sir H. Giffard was heard on his behalf, before Lords Justices Brett, Cotton, and Thesiger, on the 5th and 6th of the present month; and on the 7th judgment was pronounced, again in favour of the defendants, by Lord Justice Brett.

The Lord Justice, in pronouncing the judgment of the Court—which he did at considerable length,—observed, as the Lord Chief Justice did, that the action against the defendants was brought technically in the form of an alleged breach of contract, but in reality with intent to charge them with culpable negligence leading to a disastrous result—negligence by the one in his character as a schoolmaster, and by the other in his character as a medical man. The application for a new trial was, Lord Justice Brett said, upon the grounds of misdirection, and that the verdict was against the evidence; and Sir Hardinge Giffard had, in his able argument, exerted himself to the utmost to show that there was misdirection as to the contract alleged, which would, according to the true nature of the case, be quite immaterial, while he hardly dealt with the question

whether the verdict was against the evidence as to the vital point of the alleged neglect or ill-treatment. That is, doing the best he could for his client, he endeavoured to obtain a new trial on the ground of some miscarriage as to the technical point, in order to get a new trial on the other, though he could not impeach the verdict upon that which was the real question in the case, was fairly left to the jury, and was determined by them in favour of the defendants. But the Court considered that there had not been any miscarriage or misdirection even with regard to the technical question of contract. It had been argued that the Lord Chief Justice had only left this question to the jury—whether there was an express contract that the defendant's son should be kept in Dr. West's house in all events, and even in the event of his being the subject of an infectious disease; whereas the contract set up by counsel was that the child should be personally looked after by Dr. and Mrs. West, and should not be put under the control of the Council (*i.e.*, should not be removed to the infirmary). But the judge was bound to put to the jury the question raised by the evidence—not any question raised by the counsel, unless it was also raised by the evidence. In this case the question raised by the evidence on behalf of the plaintiff was clearly whether, if there was an express contract, it was that the child should be kept in the head master's house. And the jury had found, and found rightly, that there was no such contract. It would have been a most rash undertaking on Dr. West's part, and almost a dereliction of his duty, to have undertaken to any one parent that, however infectious the disease from which his child might suffer, he should nevertheless be kept in his house, in order to have the benefit of his personal attention, to the great danger of the other scholars; and the jury had a right to consider whether it was probable that Dr. West intended so to bind himself. Even assuming that Mr. Howell was right in saying that Dr. West had stated that the child should be kept in his house, it had to be considered whether that statement reasonably meant what the plaintiff affirmed it did; and the jury came to the conclusion that it was only a statement of what would happen in ordinary circumstances, and not an express contracting statement. There having been, then, no express contract by Dr. West, the only implied contract would be that the child should be treated in case of illness with all the care and skill that could reasonably be exercised by a parent or a person placed in such a position. The jury had to consider whether Dr. West, taking into consideration, not the welfare of this child only, but also that of the other children, and consulting the medical men, was not fully justified in removing the child to the infirmary, or was guilty of any want of due care in removing him? And the Lord Justice added, "to my mind they were fully justified in saying that in this respect there was no want of reasonable care." As to other questions relating to the mode of removal of the child, and the condition of the infirmary when he was placed in it, his Lordship stated that there were ample grounds for the jury to judge of the value of the evidence given, and that the Court considered they would be acting contrary to the rules of law to set aside the verdict as against the evidence. As to the other defendant (Mr. Jones), Lord Justice Brett said that he should feel great difficulty in saying that there was any case at all against him, or any cause of action in any form by the plaintiff against him. It was not pretended that there had been any express contract between him and the plaintiff; and it was difficult to see that there was any evidence of the existence of even an implied contract that he would use due care and skill. But even assuming that such an implied contract existed, the jury were justified in finding that there had been no want of care or skill either in the removal of the child to the infirmary, the manner of the removal, or respecting the state of the room to which he was removed. It had been strongly argued, Lord Justice Brett said, that the Lord Chief Justice had not on some points expressed himself so clearly as might have been desirable in the way in which he left the case to the jury. But the greater part of the observations objected to were rather in the nature of cautions given to the jury, and obviously rendered necessary by the manner in which the case was conducted both before it came into court and in court; the action being really one which conveyed a charge against the defendants of neglect and want of care in their respective capacities, amounting, practically, to culpable, cruel want of care, which had really caused or conduced to the death of the child—charges which, made against persons in their position, involved a question almost of life or death to them: in such a case, therefore, it was right that the jury should be cautioned, and cautioned carefully and warmly, to consider not only the case of the plaintiff, but also the tremendous importance of their verdict to the defendants. But the judgment of the Court was founded upon this—that it was unnecessary to discuss whether all these expressions were correct or not, because, by the findings of the jury on the points above referred to, the subsequent question became immaterial; and upon those findings, in which no fault could be found, the Court was of opinion that the verdict was right. The Lord Justice concluded his judgment by saying: "I must add that, considering the vehement attacks which have been made on the conduct of the defendants, and the great importance of the case to them, I think it right to say that I not only do not dissent from the findings of the jury, but agree with them, and especially in their finding that, even supposing Dr. West and Mr. Jones not to have been absolutely right in their conduct, they were actuated from the beginning to the end by the kindest and most Christian views and wishes as to the child, and that there was nothing derogatory to their character, either as to one of them as a schoolmaster, or as to the other as a medical man; and I may add that in this my brethren concur with me."

The appeal was therefore dismissed. The Lord Justice Brett began his judgment with the remark, "So far as we are concerned, the curtain must now fall on this deplorable litigation." The action *has* been a "deplorable" one from the beginning; and we will only add that everybody must hope that it has now ended altogether. It is difficult to conceive that any kind or amount of passion or feeling can afford an excuse for carrying the matter further, even if it is possible to concede that there was any excuse for carrying it thus far.

SANITARY LEGISLATION.

The attention and energies of the late Ministry were—whether from causes beyond their control, or not, we will not attempt to decide—so engrossed by questions of foreign policy and by colonial difficulties, as to leave them little or no time to spare for domestic legislation. The hopes once raised by Lord Beaconsfield's happy alliterative apothegm, "*Sanitas sanitatum, omnia sanitas*," were early doomed to disappointment, and session after session passed by without any progress having been made with the Sanitary Acts, the Medical Bills, or the promised rehabilitation of the ancient but somewhat anachronistic office of the Coroner.

But the simultaneous advent to power of a new party, Ministry, and Parliament excited the hope that in this respect the legislation of the future may present a contrast to that of the past. True, the remnant of the present

session will barely suffice for the formal and absolutely necessary business of the House, but the very shortness of the time at the disposal of the Government this year will preclude any hasty and ill-conceived legislation, while they will have ample leisure during the approaching recess for the maturing of comprehensive measures and definite plans.

It was at one time confidently rumoured that Mr. Stansfeld would return to the office which he held under the last Liberal Administration; but the progress of sanitary science has happily been spared such a blow as this would probably have been, judging from Mr. Stansfeld's conduct when he was formerly head of the Local Government Department.

Mr. Dodson, the new President of the Local Government Board, is a man of tried ability and thorough business habits, well able, if properly advised, to frame a measure which shall be a real advance, and mark an era in the history of sanitary reform. We are glad to note that Mr. Dodson, unlike Mr. Sclater-Booth, his immediate predecessor, has been given a seat in the Cabinet—a position which, we trust, indicates a due appreciation by the present heads of the State of the importance of social and sanitary science; and we should be still more glad to feel able to look upon his admission to the Cabinet as being designedly a step towards what we have insisted upon as an urgently necessary advance—namely, the appointment of a Minister of Public Health, ranking with the highest members of the Ministry. But it must be remembered that this is not the first time that the President of the Local Government Board has been a Cabinet Minister. The Act of Parliament constituting the Local Government Board was passed in 1871; and Mr. Stansfeld, the first President of the new Board, in which were vested all the powers and duties of the Poor-law Board, had a seat in the Cabinet, replacing there the President of the Poor-law Board. It is, therefore, not a "novelty in the Cabinet" to give to the Local Government Board a voice in it, as has been stated, more than once, by one of our medical contemporaries.

When we turn to the constitution of the House of Commons, we must admit that, as compared with the Parliaments of France and Germany, science and medicine are but very inadequately represented. Of the few medical men who sat in Parliament last session we now miss the names of Drs. Lush, Brady, and O'Leary. But Sir Trevor Lawrence, who, if he have not as yet played a prominent part, is at least one of us, and is very willing to work with us, is still there; and Mr. Mitchell Henry and Dr. Cameron have been again returned. Dr. Lyons, of Dublin, and Dr. Farquharson, of London, both practising physicians, are among the new members, and are valuable additions to our strength. Mr. Hastings, though not a member of our profession, has been so long and so closely associated with us in practical social work that he may almost be regarded as a *confrère*. Dr. Playfair, too, may be reckoned as an ally. Another active social reformer, Sir John Lubbock, has lost his seat, but we hope that some constituency may ere long be found to restore so useful a member to the House. The Sanitary Act of 1872 was confessedly but tentative and temporary. It is marked by all the defects of experimental legislation, and the most that can be said for it is that it has had the effect of educating the public, to some extent, to realise the necessity of a regard for the health of the people at large. It created a sanitary authority in every place, or rather, it imposed on existing local boards a new and additional function. The town councils of municipalities, and the boards of guardians in rural districts, were by it compelled to appoint a medical officer of health, as the vestries of the London parishes have done for the last twenty years. But here it ended, and in all matters of detail the authorities were left to act as they thought fit. The result is a mass of anomalies which cannot long be left in its present chaotic state. In by far the greater number of rural districts the parochial medical officers were constituted medical officers of health, receiving for the additional labour thrown upon them paltry sums ranging from £2 to £5, £10, £20, or so, a year. In the towns a general practitioner was appointed, with a salary of £50 or perhaps £100, but oftener less, as remuneration for the sanitary care of 40,000 or 50,000 souls! No guarantee was required that any of these possessed the necessary knowledge of engineering, house-building, or chemistry, and they are entirely at the mercy of the boards by which they are appointed; and the persons constituting these boards, besides being jealous of any expenditure on account of matters respecting which they are for the most part profoundly ignorant, are too often the very offenders against whom the first proceedings of the medical officer ought to be instituted.

In other cases a number of unions have combined to engage the services of a man of really high scientific attainments, or specially qualified for the work; and who is required to devote his whole time to the duties of his office On this condition the Local Government Board consent to supplement the salary paid by the local authority by a like sum, reserving to themselves the right to approve the election as well as the terms of engagement, the salary, and the combination. So far this seemed all that could be desired, supplemented as it was supposed to be by the clause by which the local authorities were precluded from dismissing their officer without the sanction of the Central Board. But this security of tenure is in practice a delusion. The Local Government Board has given its decision that combination of districts being voluntary and optional, dissociation is equally so. The unions cannot indeed combine without the consent of the Board, nor separate themselves within the period—be it of one, three, or five years—for which they agreed so to combine, but at the expiration of that time the Board has no power to prevent one or more unions from withdrawing themselves, nor the whole combination from breaking up. Several cases which have occurred during the last few years have shown that the position of the officer of a combined district is most precarious, and that he is at least as much at the mercy of his masters as the poorest parish officer,—with this difference, that while the pecuniary loss of the latter is but small, and he has his private practice to fall back on, the former has given up an established connexion, and perhaps a lucrative practice, for what he had fondly hoped would afford him a good social position and wide sphere of usefulness, to be thrown on the world to begin life afresh. This, if he have not ample private means, is simply ruin to a man past his youth and with a family dependent on him.

The ostensible pretext for such conduct on the part of the local authorities is the usual cry of hard times and the cost of the medical officer's salary, but it will generally be found that the aggregate pay of the several practitioners whom they appoint in his place, and which they have to provide unaided by the Government, equals or exceeds their share of the ex-officer's salary.

In one instance the offence of the medical officer consisted in calling the attention of the local and central authorities to the abominable sanitary conditions of certain villages which were decimated by typhoid and diphtheria, his reports and suggestions being fully borne out by the medical inspector sent down from Whitehall. In another the grievance was that he protested against the conduct of the chairman in turning the sewage of his house and establishment into the head of a stream which feeds one or two of the water-supplies of the metropolis. That men who cannot

possibly be supposed to have any interests at heart but those of their fellow-men, whose duty it is to protect the lives and health of those who cannot help themselves, should thus be at the mercy of the offenders themselves, is scandalous. Such an arrangement would not be for a moment tolerated in the appointment of inspectors of mines, factories, or shipping, and it is monstrous that it should be permitted in the case of men of higher education and social position than many of these.

We may reasonably hope that one of the first acts of the new Government will be to thoroughly reconstitute the sanitary service, to make its officers, if not actually State servants, at least secure in their offices so long as they perform their duties with efficiency and discretion, to enforce the combination of rural districts everywhere, and to demand that the medical officers of health in the larger towns shall, if not precluded from private practice, and paid salaries sufficient to attract men of known ability, be at any rate engaged in the less laborious walks of practice, and in no way dependent on the favour or in fear of the frowns of ignorant and narrow-minded guardians.

THE WEEK.

TOPICS OF THE DAY.

At a recent meeting of the City Commission of Sewers, held at Guildhall, reference was made to the late fatal fire in the City at a firm of wholesale chemists and druggists. A member moved that it be referred to the Sanitary Committee to report upon the law in reference to the storage of dangerous chemicals in bulk within the City, and the existing powers of the Commission with reference to it. He dwelt upon the appalling nature of the calamity, and argued that the large storage of chemicals in a building of four storeys, surrounded by houses teeming with human life, was very dangerous and alarming. The chairman pointed out that the Commission was only the authority for the removal of dangerous structures, and that the Court of Aldermen granted licences for the storage of explosives, and it was also stated that that body had no power to deal with any grievance which they might find existing in this case. It was, nevertheless, decided by a large majority to refer the subject to the Sanitary Committee for consideration.

Imitation is said to be the sincerest form of flattery, and it is satisfactory to be able to record that a new office, corresponding to that of our Registrar of Births and Deaths, has been created in Madrid. The report issued for the month of September last is the first detailed official statement of this kind ever published in Spain. The total number of births and deaths in that month in the whole of Spain, including the Balearic and Canary Islands, is given as 44,848 and 45,219 respectively, showing a small excess of deaths over births. The return of deaths is no doubt sufficiently accurate, as it is in some measure checked by the law, which allows no interment to take place without the written permission of the municipal authorities; but the number of births is not so much to be depended on, since many, especially those of male children, are never registered, in the hope that when they grow up the children will escape the military conscription. The return in question shows 21,710 deaths from zymotic diseases, or not very far from half the total mortality, and gives an annual death-rate of 32·3 per 1000 of the population. In nearly all the provinces containing large cities the returns show more deaths than births; but in the Canary Islands three births were registered to every two deaths, and several other districts show an excess of births. Of the whole number of children born 5·21 per cent. were illegitimate; in Madrid the ratio was a trifle more than 19 per cent.

The first of a series of drawing-room lectures under the auspices of the National Health Society was delivered last week at 23, Hertford-street, Mayfair, by Dr. William B. Carpenter, C.B., F.R.S., the subject being "Predisposing Causes of Epidemic Diseases." The lecturer explained that all the epidemic diseases with which we were acquainted were of that class to which the term zymotic was applied, that term having been first suggested by Dr. Farr in the reports of the Registrar-General. The diseases were occasioned by the introduction into the system of poison which had the power of multiplying itself within the body, and of passing from one individual to another throughout a community. There were several modes in which the poison might obtain access to the blood: it might be introduced from without by means of bad food, bad water, and impure air; or it might be introduced from within. It did not at first seem very apparent in what way the condition of persons suffering from famine was allied to that of individuals who were subjected to zymotic poison, yet history showed that pestilence always followed great famines, and it would be remembered that in our own day the Irish potato famine was succeeded by a severe epidemic. The excessive use of intoxicating liquor was also known to promote the spread of epidemic disease. The experience of the whole medical service of India was, that fever, cholera, and dysentery were peculiarly prone to attack the intemperate, the evil being greatly aggravated when the activity of respiration was diminished by overcrowding or insufficient ventilation. Although in an immense city like London they could not hope to reduce the mortality below 16 per 1000, they might destroy most of the predisposing causes of zymotic diseases. A study of those causes was, therefore, of the utmost importance, and should be the constant aim of those who took an interest in sanitary reform.

At a recent meeting of the Bristol Sanitary Authority, the Medical Officer of Health, Mr. Davies, in the course of his weekly report, alluded with regret to the fact that several cases of typhoid fever had appeared in one locality of the district. The cases were at present confined to members of families residing in five houses, and the only connexion to be traced between them seemed to be the milk-supply, which was received from one and the same retailer. This tradesman at once volunteered all the necessary information as to the sources from whence he derived his supplies; these were three in number—one on the north side of the city, and the other two on the south side. No fever had occurred amongst families supplied with milk from the north side, so the inquiries were directed to the south. The condition of one of these dairy farms was found to be perfectly satisfactory; the other was found to be clean and in good order, but its only available water-supply, which was used for all purposes, was from a mill-stream, which at the time of Mr. Davies' visit was turbid. Accompanied by the farmer, Mr. Davies followed this stream up the valley for nearly two miles, and in the course of his investigations he found that some closets discharged into it, and that a cesspool overflowed into it at winter time. In one place he discovered part of the entrails of a bullock in it, and a little higher up the two hind quarters of a calf dead of the "quarter evil"—a very contagious disease, chiefly affecting yearling calves, supposed to be identical with splenic fever in older cattle, and with malignant carbuncle in man. These quarters were macerating in the stream, producing a cold solution of gelatine mixed with the germs of the disease in question, which, if identical with splenic fever, are a peculiar form of bacteria, the introduction of which into the circulation of any warm-blooded animal is inevitably fatal to the animal experi-

mented on. The farmer, who, with his family, had been in the constant habit of drinking this water, at once expressed his intention of obtaining a direct supply from the Bristol Water Company; and Mr. Davies expressed an opinion that although there might be a few more cases of the fever which are now in a state of incubation, the cause of the outbreak had been discovered and cut off from the city. The Sanitary Authority expressed their obligations to the medical officer for the active steps he had taken in the matter.

The monthly return of the Registrar-General for Scotland for March last shows that in the eight principal towns 3911 births and 2801 deaths were registered. Allowing for increase of population, the latter number was 277 below the March average of the last ten years. The mortality was at the annual rate of 19 deaths per 1000 persons in Greenock, 21 in Perth, 22 in Aberdeen, 24 in Leith, 25 in Edinburgh, 27 in Glasgow, and 31 in Dundee and in Paisley. The miasmatic order of the zymotic class of diseases proved fatal to 482 persons, constituting 17·2 per cent. of the whole mortality; this rate was exceeded in Dundee and in Leith from the prevalence of measles in each of these towns. The deaths from inflammatory affections of the respiratory organs amounted to 642, or 22·9 per cent. Three males and eight females were aged ninety years and upwards, the eldest of whom, an advocate in Aberdeen, was aged ninety-nine years.

The *Times* says that the eleventh annual report of the directors of the Hospital for Chinese attached to the American Episcopal Mission at Shanghai shows that medical science is making rapid advances among the natives of China. In the outset the institution was regarded with mistrust and suspicion. On the first day it was totally unattended, on the second day an old woman plucked up courage and was prescribed for, and by the end of the week patients began to flock in. Dr. Parker, the physician in charge, now states that on most mornings there is a long line of sedans extending far in every direction. During the year 1878, 20,260 persons, including 103 foreigners, were treated in the refuge, thus demonstrating, in the language of the report, "how widely spread is the impression of the beneficial effects of the Hospital." The authorities of the Hospital distribute a vast amount of practical charity with very moderate means. The management now announces that it needs more ample buildings to continue its work efficiently, in view of the increasing demands which are made upon its resources. Local subscriptions are already promised in support of the undertaking.

The Council of the Society of Arts have decided to summon a public conference to consider the question of supplying London with pure water. The date of the conference has been fixed for Monday, May 24, and succeeding days. The arrangements for the conference are now being considered by a committee, and full announcements will be made as early as possible.

It was stated at a meeting of the Bournemouth Local Board, held last week, that the Local Government Board had granted the provisional order for obtaining the compulsory purchase of a site of land on the Shaftesbury Estate, for the purpose of erecting a fever hospital, and that the order was now awaiting the sanction of Parliament.

We learn with great satisfaction that Mr. William Cadge, the eminent surgeon of Norwich, has consented to be nominated for a seat in the Council of the College of Surgeons. Mr. Cadge's name has been so long and so closely associated with the Norwich Hospital, and with English surgery in the widest sense, that he cannot fail to be acceptable as a representative not only of the provincial Fellows, but of the highest interests of the College.

COLLEGIATE ELECTION.

At a meeting of the Council of the Royal College of Surgeons yesterday (the 13th inst.), arrangements were made for the annual election of Fellows into the Council of the College on the first Thursday in July next, when four vacancies will be declared, caused by the decease of Mr. Hancock and the resignation of Messrs. G. Busk, F.R.S., T. B. Curling, F.R.S., and John Simon, F.R.S. At present the following are the names of probable candidates, viz.:—Messrs. J. Lister, F.R.S., of King's College Hospital—date of Fellowship, December 9, 1852; T. Bryant, of Guy's Hospital—May 12, 1853; J. W. Hulke, F.R.S., of the Middlesex Hospital—May 23, 1857; T. Smith, of St. Bartholomew's Hospital—June 10, 1858; and B. Hill, of University College Hospital—November 24, 1859. The only provincial candidate at present is a gentleman deservedly well known, viz., Mr. W. Cadge, of Norwich—August 10, 1848, and senior of all the present candidates.

POVERTY OF GUY'S HOSPITAL.

We are sorry to learn that the report that two wards in Guy's Hospital are to be closed, on account of deficiency of funds, is no mere rumour. One ward of, we believe, more than forty beds has actually been closed, and we fear a second will be closed very shortly. The reason given for such a step, which has, it is said, been strongly opposed by the medical and surgical staff, is the diminution of funds in consequence of the great agricultural depression. But this depression is nothing new, and it is not supposed to be more than a temporary condition; and that it can necessitate a measure that seriously lessens the efficiency and resources of Guy's for both curative and teaching purposes, surely argues grave want of administrative talent and foresight. So wealthily endowed a charity ought to be able to tide over hard times without being driven to lessen its power for good by some eighty beds. It is alleged, moreover, that considerable sums have lately been or are being spent, without any real need, on the chapel of the Hospital and on the Treasurer's house.

THE HEALTH OF ENGLAND FOR THE FIRST QUARTER OF THE YEAR 1880.

The Registrar-General for England has issued his quarterly return for the first quarter of the present year. During the three months under notice the number of births registered was 221,605, being 5064 less than the number in the corresponding period of 1879. The annual birth-rate, which had been 36·0 and 36·5 in the first quarters of 1878 and 1879, declined, under the influence of the continued depression of the marriage-rate, to 34·9—a lower birth-rate than has been recorded in any corresponding period since 1850, when the rate did not exceed 33·2 per 1000. The number of deaths registered during the quarter was 145,704—equal to an annual rate of 22·9 per 1000 of the estimated population in the middle of the preceding year. The death-rate, notwithstanding the severe cold of January, was 1·3 below the average rate in the corresponding periods of the ten years 1870-79, and scarcely exceeded those that prevailed in the comparatively mild first quarters of 1877 and 1878. In the principal urban populations of England and Wales the death-rate was equal to 24·2, whereas in the rural population it did not exceed 21·0 per 1000. In twenty of the largest English towns, including London, and having an estimated population of about seven and a half millions of persons, the death-rate averaged 25·5, and was 1·3 above the general urban rate; the death-rate in these twenty towns, in the corresponding periods of the three years 1877, 1878, and 1879, averaged 24·2, 25·2, and 27·4 per 1000 respectively. The lowest rates

last quarter were 18·7 in Brighton and 19·8 both in Portsmouth and Wolverhampton; they ranged upwards to 27·6 in Manchester, 28·7 in Nottingham, and 31·1 in Plymouth. The high death-rates in the two last-mentioned towns were mainly due to the excessive fatality of measles; but the excess in Manchester does not appear to have been due to zymotic fatality. Compared with the average mortality that prevailed in the corresponding periods of 1870-79, the mortality at all ages showed a decline of 5·4 per cent.; infant mortality showed an increase of 1·3 per cent., while among children and adults aged between one and sixty years it had declined 6·7 per cent., and among persons aged upwards of sixty years 3·5 per cent. The deaths from small-pox increased from 61 in the last quarter of 1879 to 197 in the first three months of the present year; 126 of these were registered in London, 51 in Bath, and only 20 in the rest of England and Wales. The influence of temperature upon the winter death-rate is most marked in the mortality from lung diseases. During the quarter under notice 7761 deaths in London were referred to diseases of the respiratory organs, excluding phthisis, which exceeded by 1710, or 28 per cent., the corrected average number in the corresponding period of the last ten years. These deaths were equal to an annual rate of 8·5 per 1000 of the estimated population, which is largely in excess of the returns from the same causes in other parts of England; and as the variation cannot, to any considerable extent, be attributed to the effect of local temperature, in the interest of public hygiene the Registrar-General suggests that it would be interesting to ascertain how much, if any, of the excess of mortality from these diseases in London is due to sanitary condition, in its broadest signification.

THE JACKSONIAN PRIZE, 1881.

The Council of the Royal College of Surgeons have resolved, on the recommendation of the Jacksonian Committee, that the subject of the Jacksonian Prize for next year (1881) shall be "The Pathology and Surgical Treatment of Diseases of the Hip-joint."

REPORT ON THE HEALTH OF YORK FOR THE YEAR 1879.

We have received what we presume to be the annual report of the Medical Officer of Health, Mr. John J. F. Marshall, for the year 1879 on the sanitary condition of the York Urban Sanitary District. This document shows that during the period in question the births have been at the rate of 35·4 per 1000 of the estimated population, and the deaths at the rate of 24·8 per 1000; but as 177 of the latter, which occurred in the workhouse, asylums, etc., cannot be traced as those of persons belonging to the district, they have to be deducted, and the corrected death-rate is, therefore, 17·02 per 1000. This rate, though slightly less than that for the preceding year, is considerably in excess of the results recorded for the years 1877 and 1876. The mortality from the zymotic class of diseases, however, shows a considerable improvement on former years, the most fatal of these having been diarrhœa with thirteen deaths, and scarlet fever with eleven. The latter of these has been epidemic in the district for the past five years, recurring again and again in various parts, and baffling all exertions to arrest its development. As usual, the schools have proved the great medium of propagation, and the ignorance of the lower classes, who obstinately refuse to unite in any system of isolation, has greatly favoured its spread, so that, according to Mr. Marshall's experience, it is almost hopeless to attempt to deal successfully with these outbreaks unless stringent registration of all infectious diseases could be insisted on, with compulsory powers of removal to hospital of new centres of infection.

ANNUAL GENERAL MEETING OF THE SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

The meeting was held on Friday, May 7, at 5 p.m., by the kind permission of the Royal Medical and Chirurgical Society, in their rooms, 53, Berners-street. The chair was taken by the President, Sir George Burrows, Bart. The annual report, which was read by the Secretary, showed that the number of members was only 386, the same as in the previous year: ten new members had been elected, five had died, and five resigned. During the past year fifty-nine widows and fourteen orphans had received £2968 10s. The expenses had been £222 17s. 10d., the grants showing an increase of £72 10s., the expenses an increase of £41. Three widows in receipt of grants had died, and one had become ineligible through marriage; five fresh widows had been elected. Two children had ceased to be chargeable on the funds, but five fresh cases had been adopted. A present of £5 had been made at Christmas to each widow, and £2 to each orphan, and £4 to each of three orphans from the Copeland Fund. A legacy of £500 Consols had been transferred to the trustees of the Society by the executors of Miss Harriot Hurst, and the funded property had been further increased by the purchase of £814 0s. 9d. Metropolitan Consolidated Stock. The total expenditure of the Society for 1879 had been £3191 7s. 10d., and the receipts available for payment of grants and expenses were £3242 5s. 4d., leaving a balance of £50 17s. 6d. in favour of the Society. The following gentlemen were elected directors, in place of the six senior who retired, viz.:—Thomas Dickinson, Esq., Charles A. Aikin, Esq., Dr. Church, Dr. Day, A. E. Durham, Esq., and D. A. Brailey, Esq.; and Dr. Rugg was elected to fill the vacancy caused by the retirement of W. H. Sheehy, Esq. A vote of thanks to the editors of the medical journals for their kind services was carried unanimously. The meeting was then made special to consider the proposal of Mr. Steet to extend the area of the operations of the Society from its present limits to a radius of twenty miles from Charing-cross. The alteration was approved by the meeting. A vote of thanks to the Chairman, proposed by the acting Treasurer, Mr. Fuller, was carried unanimously.

PATHOLOGICAL SOCIETY OF DUBLIN.

On April 24, the concluding meeting of this Society for the present session took place in the Anatomical Theatre, School of Physic, Trinity College. The President, Dr. E. H. Bennett, occupied the chair. Mr. Wheeler presented a specimen of caries of the tibia, with fracture and repair. The patient, a young man aged nineteen, suffered for twelve years from abscesses in the leg over the shaft of the tibia. During the first year pieces of bone came away from time to time. The knee-joint at last became entirely deformed, the two femoral condyles overlapping and being anterior to the upper extremities of the tibia and fibula. An accident a year ago caused fracture of the upper part of the diseased tibia, fragments of bone protruding through the abscess below the knee. Union subsequently took place in the fractured bone, appearing to terminate the carious inflammation in the line of fracture, which was firm. Mr. Corley made a communication on a fatal case of hydrophobia which occurred a year ago. The man, a porter in a public-house, was bitten two or three months before the symptoms set in. The most troublesome symptom was gasping respiration. The disease lasted about four days. Dr. Harvey, who made the autopsy, found intense congestion and even hæmorrhages in the posterior portions of the lungs. There was intense hyperæmia of the brain, with evidences of meningitis. The microscopical appearances closely corresponded with

those described by Dr. Gowers and others. The blood-vessels were filled to an unusual degree throughout the cord and medulla, and in the latter position the perivascular lymphatics were found to be crowded with small round cells. In the examination no evidence of abscess (miliary) was forthcoming. It is noteworthy that there was marked sub-pleural emphysema in wavy lines. This was evidently recent. Dr. Finny reported another case of hydrophobia in a coal porter, forty-five years of age. It occurred exactly eleven months after he had been bitten on the right thumb. A choking sensation in the throat was the most distressing symptom. Ultimately mania set in, followed by passing amaurosis and death. During the last few hours of life much thick viscid phlegm was expectorated. Death occurred suddenly on the fourth day. Dr. Barton showed the right foot of a lady aged forty-seven years, which he had amputated three days previously. The case originated in a trivial injury sustained in June, 1873. Nearly seven years afterwards the circumference of the ankle of the affected limb was one inch greater than that of the other. There was a tender spot over the internal cuneiform bone. Syme's amputation was performed. The soft parts of the foot, the astragalus, os calcis, and the scaphoid bone were all healthy. The joint between the external and middle cuneiform bones was much diseased. The surfaces of these bones were extensively carious. There was no suppuration. The case might be designated one of silent or latent or dry caries. The Society adjourned until next session.

THE CONJOINT SCHEME FOR ENGLAND.

At the Council meeting of the Royal College of Surgeons of England, held as we go to press, a resolution was carried, on the recommendation of the "Committee on the necessary Arrangements for the institution of Additional Examinations for the Diplomas of Member and Fellow of the College," that notice be given to all the medical authorities concerned in the Conjoint Scheme for England of the formal withdrawal of the College from the Scheme, in order that the independent action of the College may be thereby secured. The Committee consists of the President and Vice-Presidents of the College, and Messrs. Birkett, Marshall, Savory, and Holmes; and its recommendation could not fail to carry great weight even with any members of the Council who might still believe in conjoint schemes and uniformity of examinations. We need not say that the movement has our full sympathy, though we regret that it had not been adopted long ago. The reasons given for the adoption of the resolution are the uncertainty as to the compulsory establishment of a conjoint scheme, and the desirability of some combination being effected amongst the English medical corporations for the purposes of giving a full and complete examination in medicine, surgery, and midwifery. We have several times pointed out that all that is needed for this purpose is the union of the College of Physicians and the College of Surgeons. Effect will not be given to the resolution until confirmed in June next.

UNIVERSITY COLLEGE HOSPITAL.

Dr. Thomas Barlow, late Assistant-Physician to the London Hospital, has just been appointed Assistant-Physician and Assistant-Teacher of Clinical Medicine in University College Hospital, where he was once a distinguished student. Dr. Barlow is also Assistant-Physician to the Hospital for Sick Children.

At the recommendation of Lord Beaconsfield, a grant of £100 has been made from the Royal Charity Fund to the Buckinghamshire General Infirmary.

THE LEXICON OF THE NEW SYDENHAM SOCIETY.(a)

A good expository Lexicon of Medicine and the Allied Sciences had been so long and widely wanted, that the announcement that the Sydenham Society had undertaken the responsibility and expense of producing such a work was hailed with great satisfaction. It was generally felt, we think, that the enterprise came especially well within the functions of a society like the Sydenham, while even the large publishing houses might shrink from such an undertaking; and the promised work was eagerly expected. We cannot say how long it is since the intention of the Society was first made known, but the hope excited by it was long deferred. Unavoidable delays and disappointment occurred before any reliable editor or editors could be obtained; but at last, early in 1879, the first and second parts of the Lexicon were published together. The first part had been prepared, printed, and issued some time previously, but, owing to some misunderstanding or mistake, the printer had allowed such an inadequate margin, that the Council of the Society determined to re-issue it with a wider one; and consequently a reprint of Part I. was issued with Part II.; and just lately Part III. appeared. We have not hitherto noticed the work, preferring to wait before doing so till enough of it was before us to give a fully fair idea of its plan, and the manner in which the plan was carried out; and we do not now propose to enter upon anything like a full critical examination of it, but, much as we must admire the execution of the work in general, we feel compelled to protest strongly against some points in the plan of it, and against the great length to which, as it seems to us, it must run if continued on the present scale.

Before, however, pointing out what appear to us to be faults, let us acknowledge to the full the many excellences of the Lexicon. It is admirably got up. The size of page, the ampleness of margin, the beauty and clearness of the type, leave nothing to be desired in these respects. And everyone must recognise the immense industry shown by the editors, and the general excellence of their work. The labour bestowed by them on it must have been enormous; but we venture to question whether that labour has always been well spent and well directed.

We do not intend to raise questions as to the correctness of derivations, translations, and like matters; such things are often disputable. The editors state in the preface that considerable care has been bestowed upon the etymology and synonymy of words; and we do not doubt their ability to offer a good defence against any alleged blots in this part of their work. But we should not have expected to find any varying of readings once deliberately adopted, and we have happened to come upon one rather remarkable instance of this. Under the heading "Abiogenesis," we are told that genesis is derived from "γίγνομαι, to generate"; but, when we turn to the synonym "Archegenesis," we are informed that genesis is from "γένεσις, generation." We infinitely prefer the later reading, but we feel rather curious to know how it was arrived at. Is it an instance of spontaneous generation; or did the editors learn somehow that γίγνομαι does not mean "to generate," but to be generated—to come into being—while γεννάω means to generate; and from this knowledge was the new derivation evolved? The treatment of these two words, and one other related word, illustrates, moreover, what we cannot but think are two grave mistakes in the plan of the Lexicon, viz., the length and large scope of many of the articles, and the great number of what we must consider vain repetitions. The explanation and history of the doctrine termed "abiogenesis" occupies very nearly a column; and four lines are taken up by an explanation of the synonym "archebiosis," in addition to the derivation of the word; and one line, in addition to the meaning of "archegenesis." Would it not have been quite sufficient as regards each synonym to say, "See abiogenesis"? When the meaning of a term has once been fully given, why should not a mere reference to that explanation

(a) "The New Sydenham Society's Lexicon of Medicine and the Allied Sciences." (Based on Mayne's Lexicon.) By Henry Power, M.B., and Leonard W. Sedgwick, M.D. Parts I., II., and III. 1879 80.

suffice for all the synonyms of that word? The editors have, we observe, been content to take that course in some instances. Thus, "albiduria" is explained, and then when "albinuria" is mentioned they simply add, "same as albiduria"; and they have had the courage, here and there, even to refer the reader to a word not yet arrived at. The same treatment persistently carried out would have saved much space. Some other forms of, as they seem to us, wasteful repetitions are pointed out in a letter, published elsewhere in our columns to-day, from a correspondent whose right to speak with weight and authority on such a matter will be readily recognised. We may well be content to refer our readers to his remarks instead of enlarging further on this point in the plan of the Lexicon, and will only remark, with regard to the number of columns given up to the mention and explanation of words having the prefix *anti*, that surely a very large portion of that space might have been well saved, without lessening in the least the value of the work, if a clear full explanation of the force and use of the prefix had been given with a few illustrative examples, and readers had been left to use their common sense in arriving at the general application of it.

As regards the length and fulness of many of the articles, it appears to us that in this direction also a great mistake is being made. In a lexicon one would hardly look for accounts of the causes, symptoms, treatment, etc., of diseases, for detailed chemical processes, anatomical descriptions, essays on the therapeutics or toxicology of drugs, and so forth. Many of these articles are no doubt very good, focussing up clearly and concisely the present state of knowledge on each subject, but we contend that they are altogether out of place in such a work as this. We cannot afford space to name more than two or three instances, but as examples of what we mean we may name an article of four columns on "*Alcohol*," one of like length on the "*Alkaloid process*," and one of two columns on "*Argenti nitras*"; and in Biology the distinguishing characteristics of classes and orders are given, and generic and specific descriptions of such animals and plants "as appeared to possess some medical interest." In short, the editors are producing an Encyclopædic Dictionary of Medicine and the Allied Sciences, instead of a Lexicon.

We agree with our correspondent, before referred to, in thinking that the utility of noticing eminent men in this Lexicon is, to say the least, very questionable. If it be done, it should be done according to some very definite rules of selection, as well as accurately; and we have quite failed to discover why one man is honoured and another left out in the cold. At first we thought the choice was determined by the name being attached to some operation, or some discovery or invention. Thus we find "*Abernethy, John*, English surgeon, b. 1764, d. 1831," and then follows a description of "A.'s method of tying external iliac"; so also "*Ampère, André Marie*," only we are told where he was born and died, as well as when, and then "A.'s laws" and "A.'s rule" are given; and "*Anel*" is distinguished because of his sound and his syringe. But this rule fails us, for no special distinction of this kind follows *Arago's* name; and we meet with "*Aran, François*, a French physician," who only "wrote on diseases of the heart and arteries"; with "*Archambault, Théophile*, a French physician," distinguished by the statement, "He wrote chiefly on mental diseases"; and even with "*Alyon*, a French physician," of whom there was nothing to say except that he was born and died; while no mention is made of *Alison* or of *Andral*: so that we are at a loss to imagine what guides the editors in this respect.

We have confined ourselves chiefly to finding fault with the scale upon which the Lexicon is being produced; and we trust that the editors will earnestly strive to make a great reform in this respect. It is not too late to do this, and if it be not done the possible value of the work will be very greatly impaired, for the magnitude of it will make it almost useless as a book of frequent and ready reference. It must be acknowledged that the editors labour under great disadvantages. They are both very busy men, and can work on the Lexicon only in the intervals left unoccupied by the daily demands of their life-work; and the Lexicon has to be produced from "hand to mouth," so to speak, while the whole of the skeleton—the word-framework—of such a work ought to be settled and completed before any part is published. Hence arise, perhaps, the frequent want of a due recognition of the degrees of importance of the various subjects noticed, and of the sense of proportion in the length of articles, and the lack of judgment and discrimination in the selection and rejection of the words to be included. And the consequence is that we are threatened with a work which will be neither a good and useful revised edition of "Mayne's Expository Lexicon," nor such a valuable work as Littré's "Dictionnaire de Médecine," but a second-rate Encyclopædic Dictionary of Medicine and the Allied Sciences, which will be much too big and cumbersome for everyday use, and will contain a mass of articles much more suitable for text-books and other common and accessible works. We will hope that some power may yet intervene to make the new Sydenham Society's Lexicon more what is so much wanted, and lessen, or change the character of, the labour it at present imposes upon its able editors.

FROM ABROAD.

The Plague in Astrachan.

Early last year the various European Governments despatched medical commissioners in order to study the plague which was said to have broken out in Russia; but, hastily as they repaired to the spot, not one of them arrived before the disease had ceased to exist, so that the accounts which they transmitted to their respective Governments were entirely retrospective. The Paris Academy of Medicine formed a committee in order to furnish the French Commissioner (Prof. Zuber, of the Val-de-Grâce) with instructions, which had to be sent after him. M. Jules Rochard was chosen as the reporter of the Committee, and has just submitted to the Academy a report upon the subject. Of course the Commissioner had no opportunity of putting his instructions into force, and M. Rochard has now laid them before the Academy under the designation of "Report on the Researches requiring still to be made for the elucidation of the obscure points which the study of the Plague presents." This report was read at three successive meetings of the Academy, and occupies some seventy pages of its *Bulletin* (April 13, 20, and 27). It is, in fact, an elaborate clinical and pathological history of the plague, going over a great deal of ground that has been frequently traversed; and terminates with suggestions concerning the investigations to be carried on in the laboratory with respect to the part which microscopic organisms play in the production of the disease. An elaborate note from the pen of Prof. Pasteur, describing how these investigations should be carried on, is appended to the report. M. Jules Rochard thus sums up the programme of the researches and experiments which the Committee (MM. Pasteur, Bouillaud, Bouley, Fauvel, Davaine, Jaccoud, Marey, and Rochard) considers deserving of attention:—1. The collection of numerous, complete, and detailed observations, profiting by all the means of investigation which are at our disposal at the present time. 2. The investigation, by means of the microscope and chemical analysis, of the special changes which the plague induces in the liquids and solids of the economy. 3. An inquiry as to the conditions under which the disease is developed, the causes which influence its propagation, the value of the prophylactic measures which are directed against it in order to limit its ravages and to prevent its spreading beyond its centres. 4. Researches in order to ascertain whether the plague does not owe its characteristics to a special microscopical organism; and, in the case of an affirmative, the examination of the properties of this organism by inoculating animals with it and "cultivating" it in appropriate liquids.

Pathogenesis of Epilepsy.

Prof. Lasègue terminates a critical article (*Union Médicale*, April 29) upon the portion of Dr. Gowers' Gulstonian Lectures on Epilepsy which relates to the influence of psychical causes in the production of the disease, with the following passages:—

"At the commencement of this century certain literary doctors exerted their ingenuity in explaining psychologically

the origins of puerperal insanity. Was not the young mother the subject of pleasing or of exciting sensations; and did not these joys, anxieties, and new responsibilities engender disturbance of the serenity of her mind? And was not delirium an entirely natural consequence of such moral perplexities? Who at the present day, in the presence of the multiple nervous lesions, the paraplegias, the hemiplegias, and the hysterical crises unconnected with intellectual manifestations, induced by gestation, would venture to continue this pleading in favour of moral causes?

"As to epilepsy, there does not exist even a semblance of an excuse. Can it be tolerated that the most terrible of diseases shall be explained by the humblest of the *ictus*? Will an instant of fear suffice to create an implacable cerebral affection, destined to pursue an evolution which terminates in the gravest encephalic perversions? And yet neither the extremest fear, nor imminent death, nor supreme peril, have force sufficient to induce ulteriorly an epileptic vertigo of a few seconds, any more than the great attack! The true law of epilepsy, that which constitutes its enormity, which discourages its treatment, is that it borrows nothing from external circumstances. With the exception of sleep, there is not an element of health or disease whose useful or hurtful influence can be acknowledged. The child grows up, and remains at forty the epileptic he was at fourteen. He may be rich or poor, sickly or robust; he may lead the most correct or the least regular of lives—it is all the same. Can anyone cite to me, I do not say a series of crises, but a single attack determined by a moral cause, whether joy or terror? The unexpected and unexpectable, that is the characteristic which dominates over all others. And yet, how pressing is the search for active causes, learned by their effects!—for the known cause may be more or less suppressed, and with it the consequences would disappear. All efforts have proved unproductive. Epilepsy, unfortunately, is neither a chance occurrence nor a pathological curiosity, and the occasions for observing it are anything but rare. The families join with anxious curiosity in investigating the conditions which favour the attack. 'Could we but foresee and prevent the fit!' is the consecrated phrase. All efforts have proved unproductive, and Dr. Gowers, preceded in this channel by what he timidly terms popular phraseology, discovers not the cause of the attack, but of the entire disease itself. And so energetic must have been this cause that its effect became exhausted at the first onset, and it is no longer to be dealt with. It is true that with the triad, fear, emotion, anxiety, stimulating the nervous centres, exciting the vaso-motor system, and precipitating the movements of the heart, one has no business to feel astonished at its giving rise to epilepsy! This is an error in pathogenesis, and a fault in pathology, which it would be of no consequence to point out if they were not also committed by other physicians. Epilepsy is still for a small number of practitioners a neurosis, and for a still smaller number the ideal of neuroses. Now, from the moment we begin speaking of neuroses, no fantastic causality seems out of place! For my part, I am no statistician, and I place no faith in the assertions of hospital figures; but I declare that I never met with a case of true epilepsy which, after careful personal inquiry, appeared to me to have originated in fear or in emotion of any kind."

Amputation in the Aged.

In the *Centralblatt für Chirurgie* for January 10, Dr. Max Oberst communicates a paper detailing the results of the amputations performed in Prof. Volkmann's clinic at Halle, upon persons of more than fifty years of age. Until recently, he observes, the generally admitted maxim, founded on long experience, prevailed that the results of operations were influenced to a great extent by age; and those performed in old persons turned out much more unfavourably than those which were performed in the bloom and vigour of life. The condition of the cellular tissue exposed it to phlegmon, while the unfavourable circumstances of the circulation in the aged led to gangrene of the flaps, and consequent putrefactive infection. Some surgeons laid down the diminished power of resistance and the increased "vulnerability" of old age as contraindications for the operation. It is only since the introduction of the antiseptic system that the erroneousness of these views has been shown, by proving that the age of the patient exerts no influence on the course or issue of amputations, providing that two circumstances be certainly avoided—the septic process and the septic fever arising from it, and a great loss of blood. During the vital energy of youth both sepsis and loss of blood, to a certain extent, can be resisted; while a small amount of these may be too much for the aged, breaking up their strength and leading to a rapidly fatal termination. So that if we wish to place all ages on an equality in relation to recovery after amputation, we must therefore guard effectually against the origin of the septic process and a considerable loss of blood. Both of these we are now happily able to do by means of the Listerian treatment of wounds and the application of Esmarch's bandage.

In proof of what is advanced above, statistics of the Halle clinic may be cited, comparing the results of amputations treated antiseptically, without reference to age, with those which were performed on persons above fifty years old. Of 220 patients upon whom amputation has been performed since March, 1874, 9 died, or 4·1 per cent.; and of the 48 patients who were more than fifty years of age, 2 died, or 4·17 per cent. In other words, the results, as far as life was concerned, were not influenced by age. Of these 48 patients, 30 were between fifty-one and sixty years of age, 13 between sixty-one and seventy, and 4 between seventy-one and eighty. One patient upon whom amputation of the thigh was performed, and who recovered, was eighty-four years old. Of the 48 amputations, 7 were of the forearm, 6 of the arm, 1 disarticulation of the shoulder, 7 partial amputation of the foot, 13 of the leg (with two deaths), and 14 of the thigh. In one of the fatal cases, amputation of the leg for senile gangrene (aged seventy-four), death was caused by tetanus, a complication with regard to the prophylaxis of which we still are powerless. The second death occurred after amputation of the leg for injury in a man (aged fifty-six) addicted to the use of alcohol. He died, with the wound in a completely normal condition, sixty hours after the operation, without ever having completely recovered from the narcosis. The course of the wound in all the cases was unattended with reaction, no phlegmon, suppuration of bone, or phlebitis occurring. In one-half the cases absolute union by the first intention took place, and in the remainder union was delayed by slight gangrene at the edges of the flaps or by small suppurating fistulæ.

In the above comparison there have been excluded complicated cases in which amputation has been performed during existing sepsis, amputations co-existing with other serious injuries, double amputations, cases in which the patients have died of diseases which certainly had no connexion with the operation, and hip-joint operations.

The Removal of Hairs by Electrolysis.

Dr. Hardaway, of St. Louis, in the *Philadelphia Medical Times*, February 14, recalls attention to a procedure for the permanent removal of hair which he published about two years since, as further experience has convinced him and others of its efficacy. He has found it especially serviceable for the removal of superfluous hairs on the face in women, by whom dermatologists are frequently consulted on this account.

"The method of procedure now adopted by me, and believed to be the most satisfactory under all circumstances, is as follows:—A No. 13 cambric needle is attached to any convenient handle, which latter is connected with the negative wire of a galvanic battery; a moistened sponge-electrode is connected with the positive pole. Under a strong lens held in the left hand, the patient being seated in a reclining chair facing a good light, the needle is entered as nearly as possible into the hair-follicle. After this has been accomplished, and not till then, the patient is told to approach the sponge (positive) electrode to the palm of the hand. The needle is not withdrawn until a slight frothing is observed around its stem, showing that the electrolytic action has been fully developed; but to avoid shock the sponge electrode is first released by the patient, the needle being removed subsequently—being exactly the reverse of the initial steps. I always leave the hair *in situ*, as it is a guide for the introduction of the needle, the instrument being entered alongside of it, besides being an immediate guarantee of the success of the operation. For if the hair comes away with the very gentlest traction of the depilating forceps—a point always to be tested at once—we know that the papilla has been

destroyed; but if force is required for its extraction, it is a sign that the follicle has not been properly entered. I have rarely known the hair to re-grow when this test has proved successful. By observing this simple rule, one is enabled to know at the time the success or non-success of his operation. If the hair does not come out with the feeblest traction, I re-introduce the needle time and again until it does; so that it is possible to make electrolysis an almost absolute certainty as to permanency of result. With the larger number of hairs one introduction of the needle generally suffices for destruction; in some instances, however, the follicle does not run continuously with the apparent direction of the external portion of the hair, but diverges in one direction or another, thus making the entrance into or near it a matter of difficulty. In such cases the direction of the follicle must be sought for by repeated attempts. Frequently, when the follicle has been accurately penetrated, the fact is evidenced by the twisting of the hair as the needle enters. Under a strong lens (one or two inch) it is not difficult to introduce the needle forcibly directly into the follicle; but this is not absolutely necessary, as the requisite destruction occurs if the instrument is in its immediate neighbourhood. For the purposes of the operation I generally employ eight cells of a freshly-charged galvanic battery. Each electrolysis occupies but a few seconds, the time occupied being in proportion to the number of elements used; but it should be remembered that the pain experienced bears the same relation. It may be as well to say here that the amount of pain felt differs in different patients and also according to the region attacked, and that, while it is by no means trivial, it is not unbearable, and a tolerance seems to be established after a few sittings. The immediate effect of an electrolysis is to produce an urticarial wheal around the mouth of the follicle, with a certain amount of congestion and perifollicular exudation. In a few hours afterwards the circumscribed congestion disappears, leaving small papules and pustules at the point of operation; and these in turn leave behind them minute red cicatrices, which may remain visible for some weeks. For this reason, where the hairs are numerous, as upon the upper lip, I do not take out more than ten or twelve at a sitting, generally making the operations a week or two apart. Where there are but few hairs, situate on a less prominent region, all of them may be removed at the same visit. Minute scars are most apt to occur when it has been found necessary to introduce the needle a number of times for the same hair; but even on the lip the most marked cicatrices are not noticeable to the naked eye after a few weeks. Like all other operations of a delicate nature, this one requires a certain amount of skill and tact only to be had by some experience in its performance; but fortunately the manipulations are readily acquired, thus placing it at the disposal of anyone who possesses a good galvanic battery. I regard a powerful pocket- or hand-lens as an indispensable adjunct. While it is possible to eradicate even very small, downy hairs, such growths scarcely ever amount to a deformity, and their destruction entails so much annoyance aud labour that I rarely ever make the attempt; but the *forte* of the operation is in the permanent removal of stiff, beard-like hairs occupying prominent regions. The long, robust hairs on moles are readily destroyed, and often the mole is made to disappear at the same time. It only remains to say that an abundant experience, now running back a number of years, has amply demonstrated the permanent and successful results of the method."

Effects of Atropia and Duboisia on the Eye.—As the result of an investigation which Dr. Risley, Ophthalmic Surgeon to the Episcopal Hospital, Philadelphia, has been carrying on, "On the Relative Value of the Sulphates of Atropia and of Duboisia in Ophthalmic Practice," he comes to the following conclusions:—1. That in solutions not stronger than two grains to the ounce, duboisia sulphate is free from danger. 2. That this solution more rapidly paralyses the ciliary muscle than a four-grain solution of atropia sulphate. 3. That the duration of its effect is less than half that of atropia sulphate. 4. That the preparations now in the market are more liable to irritate the conjunctiva than neutral solutions of the sulphate of atropia. 5. That in the treatment of inflammation of the eye duboisia is quite as useful as atropia, and may therefore be used as a substitute. —*Amer. Jour. Med. Sciences*, April.

FASHION IN DEFORMITY.(a)

The lecturer passed in review the various methods adopted by different nations, and at different ages, of deforming or altering the natural form of some portion of the body in obedience to the dictates of fashion. The different practices of shaving, cutting, and dressing the hair and beard, and tattooing the skin, were alluded to in passing, but more attention was given to the disfigurement of the nose, lips, and ears, by cutting holes and inserting various substances through them; almost identical customs being described among people living at most remote regions of the world. The fantastic methods of filing and chipping the front teeth into different patterns, practised by the Malays and some African negroes, were then noticed. An account of the mode of altering the form of the head, which prevailed once extensively in Europe, and was almost universally adopted in Peru and on the Western Coast of North America, was followed by a description of the effects produced upon the feet of civilised races by the unnatural form of the boots commonly worn, the evils of pointed toes and high heels being exemplified by diagrams and specimens.

The constriction of the waist was next noticed—the figure of the Venus of Milo and one taken from the last Paris fashion-book being compared and contrasted. All these customs were shown to arise from a similar propensity, which manifests itself in the human mind under all conditions of civilisation, to tamper with a form which good sense, as well as good taste, ought to teach was the most perfect that could be designed. The origin of these fashions is mostly lost in obscurity, all attempts to solve them being little more than guesses. Some of them have become associated with superstitious observances, and to have been spread and perpetuated. Some have been vaguely thought to be hygienic, most have some relation to conventional standards of improved personal appearance, but, whatever their origin, the desire to conform to common usage, and not to appear singular, is the prevailing motive which leads to their continuance. The vitiation of taste produced by these conventional standards—which shows itself in the Malay in the preference of black teeth to those of the most pearly whiteness, in the Bongo negro and American Botocudos in liking lips and ears which are enormously (and to our eyes hideously) enlarged by huge wooden plugs inserted through them, in the Chinook Indian by contempt of any head which is not flattened like a pancake or elongated like a sugar-loaf—is displayed among ourselves by the admiration of unnaturally pointed toes and contracted waists.

The Lower Thames Valley Sewage.—It is with much satisfaction that we are, at length, able to record the termination of the Local Government Board inquiry on the subject of the disposal of the sewage of the Lower Thames Valley. The proceedings have extended over ten weeks, during which time there have been forty-five sittings, and no less than eighty witnesses have been examined, forty-one for, and thirty-nine against, the scheme. At the last meeting, Mr. Michael, Q.C., concluded his arguments for the promoters, and combated the different points brought forward by the opponents of the scheme. He wound up his address by pointing out to the inspectors that no question of money could weigh against the vast amount of misery which might be caused by the decision in this case. It might seem an exaggeration to say that the lives of hundreds of thousands depended upon this inquiry; but, if it were an exaggeration, then the importance of all our sanitary statutes, regulations, and appliances went for nothing. They were engaged in a great war in which money was ranged on one side, against life on the other. Well knowing the natural impatience of taxation, he would yet say that their responsibilities could not be evaded. They must fight the battle against preventable disease, and they would be neglecting the first of duties if, whether as individuals, or as members of public bodies, they failed to grapple with issues which were nothing else than national. The Inspector then declared the inquiry closed, and we have now to await the result of the report to the Local Government Board, and the ultimate decision of that body.

(a) Abstract of a lecture delivered by Professor Flower at the Royal Institution.

REVIEWS.

Medicinal Plants: being Descriptions, with Original Figures, of the Principal Plants employed in Medicine, and an Account of the Characters, Properties, and Uses of their Parts and Products of Medicinal Value. By ROBERT BENTLEY, F.L.S., M.R.C.S.E., Professor of Botany in King's College London, Professor of Materia Medica and Botany to the Pharmaceutical Society of Great Britain, etc.; and HENRY TRIMEN, M.B., F.L.S., Department of Botany, British Museum, late Lecturer in Botany at St. Mary's Hospital Medical School. The Plates by DAVID BLAIR, F.L.S. In four volumes. London: J. and A. Churchill.

THE work which is now before us in its completed shape is one which reflects the most signal credit on all who have been concerned with it. The plates are admirable, the letterpress excellent and most reliable; nor can we overlook the energy and enterprise of the publishers, who undertook the production of a work, which, however well it may have succeeded, did not at the first glance promise any very magnificent pecuniary results. Indeed, it is in no small degree due to them that these magnificent volumes are now available for the public.

Originally the work was planned by Professor Bentley as a kind of illustrated guide to the British Pharmacopœia; but the Pharmacopœia of the United States, and as far as possible the Pharmacopœia of India, have been included in the completed scheme. Such an undertaking was obviously too much for one man already laden with multifarious duties, and in working it out, Dr. Trimen, of the British Museum, a well-known and skilful botanist, was associated with Professor Bentley. To him has been relegated the more strictly botanical part of the work, whilst Professor Bentley has dealt chiefly with its medicinal and pharmaceutical aspects. They are to be complimented on the praiseworthy regularity with which the various parts of the book, amounting to forty-two in number, have made their appearance over the space of four years, during which its publication has lasted. Various circumstances have regulated the dates at which certain of the plates have appeared, for inasmuch as far as possible every one has been drawn from living specimens, the times and seasons had to be seized when the various plants were obtainable in our botanic gardens or elsewhere.

The total number of species described is 306, distributed as follows:—Vol. I., Nos. 1-69, Ranunculaceæ—Anacardiaceæ; Vol. II., Nos. 70-146, Leguminosæ—Valerianaceæ; Vol. III., Nos. 147-227, Compositæ—Thymelaceæ; Vol. IV., Nos. 228-306, Artocarpaceæ—Algæ. It will be understood that all of these are not contained in the official Pharmacopœia. Many represent the sources of substances in common use or repute, or are dangerous as poisons, and are indigenous in this country. But the total number of species found in these islands, and here depicted and described, is comparatively small, numbering only sixty-seven altogether.

It would be impossible to enter into any detailed criticism of the individual parts of a work of such extent and scope in the space available for us. We must, therefore, content ourselves with a brief sketch of the mode in which the work has been executed. First there comes the botanical portion, giving the natural order, genus, and species according to the best authorities, and then follow some of those synonyms which are the bane of natural science. There is next a reference to the various figures of the plant available, the medical botanies chiefly quoted being the famous one by Woodville, which has several times been republished in this country; and another, also well known to all English medical botanists, Stephenson and Churchill. Two are American, Bigelow and Burton; and three German, Hayne, Nees von Esenbeck, and Berg and Schmidt. Though the great work of Baillon and that of Le Meaout and Decaisne are often referred to in other respects, no French author on the special subject of medical botany is contained in the list.

The descriptions of the various plants have been made, like the drawings, as far as possible from living specimens, but of course dried specimens were here more readily and naturally available than for the plates, especially those contained in the magnificent collections at Kew, to say nothing of hardly less important herbaria elsewhere. No microscopic details are given, as being beyond the scope of the work.

As regards the medicinal and pharmaceutical part of the work, praise may likewise be well bestowed—so much so that we can only regret that the illustration of the French Codex did not also enter into the scope of the original scheme. Undoubtedly the valuable work of Flückiger and Hanbury has here been of great service to Professor Bentley, but his own large experience and extensive knowledge have markedly borne their fruit. To pharmaceutical chemists all that relates to the *collection*, *preparation*, and *commerce* in any particular drug must possess particular interest, and still more we hope what is here said on *adulterations* and *substitutions*. For we trust that our coadjutors, the pharmacists, will not accept the dictum that adulteration is but a form of competition, and needs not to be controlled by any rules of morality, public or private.

In the last section of each article we find a careful examination of the medicinal properties and uses of the substance or plant described. This will be of great use to many if they care to study what is here laid down. Professor Bentley says he thinks that some of the new remedies introduced from America and India are likely to be of great service. For our own part, whilst giving all due credit to the value of novelties, cracked up one week and forgotten the next, we would strongly urge the advisability of reconsidering the effects and uses of drugs on which our forefathers in medicine relied. We are not quite prepared to recommend a new mithridaticum compounded on the principle that something in it is sure to do good, but with our new means and appliances, our increased care in observation, and, above all, the practice of making use of "simples," we might hope to extract the grain of wheat from what might be called the bundle of chaff. Be that as it may, Professor Bentley has clearly helped us on our way, and his work deserves both recognition and thanks.

Finally, we repeat that we look, and others must look, upon the work as a credit to British enterprise and accurate scientific knowledge. It takes its place at once and for all time as a standard treatise to which all writers on the subject of medical botany must hereafter refer.

GENERAL CORRESPONDENCE.

THE LEXICON OF THE NEW SYDENHAM SOCIETY.

LETTER FROM MR. J. CHATTO.

[To the Editor of the Medical Times and Gazette.]

SIR,—Will you allow me to point out to the editors of this work, before it is too late, that if it be continued on the scale upon which it has been commenced, great dissatisfaction will certainly be the result. The third part, which has just been issued, completes the twenty-fifth sheet, or 400 pages of double-columned type, and yet only brings the Lexicon to the word "arteriography." At this rate, Mayne's Lexicon, upon which this one is founded (itself a very bulky book), will be multiplied five or six times. If this great increase were necessary or useful it might be borne with, although not without much inconvenience; but, in point of fact, the Lexicon contains a vast number of words which, however much they may testify to the industry of the editors in collecting them together, and in many instances exhuming them from a well-deserved oblivion, will certainly never be turned up in their new receptacle.

In proof of what I have stated above, I may refer to some of the articles contained in this third part. Thus for the word "*Angina*" we have more than ninety separate articles, some of them, it is true, taking only a line or two and being mere synonyms, yet all requiring to be set out in appropriate type, and altogether occupying five columns. *Anther* is not a word which would seem to require very elaborate treatment, yet, besides the article giving a general account of it, there are between fifty and sixty others, or nearly two columns, specifying its various forms and mode of attachment. The prefix *Anti* is of course constantly in use, but its ordinary meaning is so obvious that one would scarcely expect to find it attached to some 140 articles, occupying six columns. The different preparations of *Antimonium* and *Antimony* are set forth in 200 articles, occupying twelve columns—to whose interest or advantage it would indeed be difficult to specify. *Apium* is only a small intruder with its twenty-four articles. We are more at home with *Apoplexia* and *Apoplexy*, but could never have supposed that

its different varieties would furnish designations for ninety articles. One expected a longish list under *Aqua*, but that this would extend to 450 articles and occupy twenty-two columns could never have been anticipated. After this, treating of *Arbor* and *Arbre*, used as prefixes, in ninety articles, seems almost moderate, though somewhat startling. *Aristolochia* has more than fifty articles assigned to it, *Arrowroot* thirty, and *Artemisia* fifty. Finally, we arrive at *Arteria*, which numbers 350 articles, contained in fifteen columns. If many of these might have been omitted with advantage, they have, at least, a better *raison d'être* than most of their predecessors.

This colossal dictionary will not meet the want that is most seriously felt, viz., a good glossary of modern foreign medical and scientific terms, which need not be a book of great bulk. There are several medical dictionaries, but none of them have attempted to supply this want, with the exception of Palmer's Pentaglot Dictionary (excellent, but now out of date) and Littré's *Dictionnaire de Médecine*, which contains a glossary that is very imperfect. The want of such a book is felt daily by the readers of foreign scientific literature. A dictionary of German medical terms has lately appeared in America, of which I have not yet seen a copy; for, strange to say, easily as any new book that is published on the Continent of Europe may be seen in London, that is not the case with books published in America. Mr. Lewis, of Gower-street, is about to publish a revised edition of this work.

I have not made any examination of the mode of execution of the Lexicon, but, judging from the great abilities of the editors, which no one can appreciate higher than myself, I have no doubt it will be found to be all that can be wished. One point, however, I must refer to. I see that it is intended to notice eminent men—a decision of questionable utility in a book of this kind. If it be done at all, however, it should be done usefully and accurately. In this third part, *Arago* is disposed of in five lines, while *Arnott (J.)* is merely described as "an English physician of the nineteenth century," and then short notices are given of his bed, his dilator, and his method of local anæsthesia. Now, this is a confused mixing up of two brothers. Neil Arnott was the inventor of that blessing to suffering mankind, the water-bed, which he generously presented to the public; and not only should the dates of his birth and death have been given, but also that of the publication of his great work the "Elements of Physics," the appearance of which constituted quite an epoch in the popularisation of the truths of natural science. The urethral dilator and the production of anæsthesia by freezing are inventions of Dr. Neil Arnott's brother, Dr. James Arnott, who is still living, and who quite recently furnished to your pages an interesting retrospective account of his various ingenious inventions. I am, &c., JOHN CHATTO.

Royal College of Surgeons, April 28.

CHIAN TURPENTINE IN CANCER.

LETTER FROM MR. J. CLAY.

[To the Editor of the Medical Times and Gazette.]

SIR,—As I am naturally most deeply interested in this subject, I beg leave to thank you for your well-timed annotation on the trial of the Chian turpentine at the Middlesex Hospital. Immediately after reading the article I telegraphed to the dispenser at the Hospital, requesting him to send me a sample of the turpentine they were using for cancer, as I desired to test its genuineness. Yesterday I received a sample, and I hope I am not infringing any professional rule when I say that I saw at once that it was extremely impure, and on thoroughly testing it my suspicions were fully confirmed. I send for your inspection and comparison a specimen of the drug, as well as one of the pure article. It does not surprise me to find that under these circumstances the results at the Middlesex Hospital "hitherto have not been very striking." I am, &c., JOHN CLAY.

Birmingham.

[Would it not be well for Mr. Clay to put the authorities of Middlesex Hospital in the way of procuring a supply of the pure drug? We are sure that the Middlesex Surgeons will be only too glad to give it a fair trial.—ED. *Med. Times and Gaz.*]

THE SUPREME CORONER.

LETTER FROM MR. E. L. HUSSEY.

[To the Editor of the Medical Times and Gazette.]

SIR,—In a recent number of the *Medical Times and Gazette*, among the answers to correspondents, you mention the case of the Chief Justice in the time of Henry VII. holding an inquest as coroner; and you refer to the circumstance that the Chief Justice of the Queen's Bench is Supreme Coroner of England, and can exercise the office of coroner in any part of the kingdom.

It has been generally accepted by text-writers that the Chief Justice of the Queen's Bench is Supreme Coroner over all England, and that the other Judges of the Court are Sovereign Coroners.

This has been altered by the Act establishing the Supreme Court of Judicature. All the Judges of the High Court of Justice now have equal authority and jurisdiction. They are between twenty and thirty in number; and it is presumed that they are all equally Supreme and Sovereign Coroners.

These high officers must, however, exercise the office in person: they cannot delegate their power to a deputy.

Oxford, May 10. I am, &c., E. L. HUSSEY.

CORRIGENDUM.

LETTER FROM MR. C. B. FOX.

[To the Editor of the Medical Times and Gazette.]

SIR,—Will you kindly correct an error that occurs on page 510 of the *Medical Times and Gazette* of May 8, which if *un*rectified will occasion me a considerable amount of personal inconvenience. In the list of new Fellows of the College of Physicians my name is inserted so as to lead the reader to believe that I live at Chelmsford—a town which I left for Ilfracombe nearly a year ago. I would not thus trouble you but for the fact that I have a very large correspondence, and the error, if uncorrected, will cause confusion and delay to my correspondents and myself.

I am, &c., CORNELIUS B. FOX.

Highfield-road, Ilfracombe, May 10.

BAD RESULTS FROM THE USE OF ESMARCH'S BANDAGE.

LETTER FROM MR. W. D. WILKES.

[To the Editor of the Medical Times and Gazette.]

SIR,—With your permission I should like to ask, through your journal, the experience of surgeons in the special instance of the use of Esmarch's bandage and elastic tubing when performing a circular amputation of the arm in its upper third or its junction with the middle third. I am led to do so from the fact of after-sloughing of a great part of the flap in two cases in elderly women—1. Aged fifty-five, for epithelioma in the cicatrix of an extensive burn at the elbow in early life; 2. Aged seventy-four, for epithelioma of the forearm. Happily both recovered, but during the few days following the operation the agony from the dying integument and the surgical fever placed them in great risk of life.

Thinking the matter over, I imagine that the circulation in the flap had been very materially interfered with, first, from its close proximity to the seat of pressure from the tubing, and secondly, that in dissecting up the flap you further weaken the blood-supply, in dividing the small vessels which pass into the integument through its cellular-tissue connexion with the fascia beneath. The vitality of the skin seems, in consequence, so lessened, that in the reaction the stump swells, opens, and part of it dies.

I do not remember such results from the old tourniquet or from digital pressure on the brachial artery. The tourniquet exerts no more pressure than enough to stop the pulse, but with the bandage and tubing you have no landmark to guide you as to the amount of pressure, and probably more is used than enough to stop the circulation, and also to cause such changes as may invite inflammatory reaction, ending in gangrene of the part. I should be glad to know if other

surgeons have found a result similar to my own, and, if so, whether it would not be wise to return to the old plan of digital pressure on the artery when this form of operation seems indicated, in preference to any other.

I am, &c.,

W. D. Wilkes, Surg. Salisbury Infirmary.

27, New Canal, Salisbury, May 10.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

Friday, April 23.

E. Headlam Greenhow, M.D., F.R.S., President, in the Chair.

Case of Acute Rheumatism with Multiple Embolisms.

Dr. Southey read notes of this case:—Phœbe G., aged twenty-six, was admitted in June, 1879, under my care in St. Bartholomew's Hospital, for her seventh attack of acute rheumatism. She had been twice previously under me in the same ward. She had talipes of the left foot, but was otherwise well made, muscular, and well nourished. She was a widow, had had one child and one miscarriage, and was a woman of nervous temperament, latterly perhaps not very temperate in her habits. Present illness began with well-marked rheumatic pains and joint affection seven days before her admission, at which time she was confined to bed, and was at night-time delirious. *Condition on Admission:* Generally hyperæsthetic. Swelling and tenderness of right parotid gland, which prevented her opening her mouth, and produced some deafness of right ear. Characteristic rheumatic blush. Swelling and painfulness of knuckles of left hand; other joints, knees and ankles, had been stiff and painful. There was an ecchymosis and abrasion of skin from recent fall upon right forearm, and several purpura spots over trunk and limbs, some of them slightly raised, others sunken; a few were vesicular. Temperature 102·4°; pulse soft, 120; respirations 36. *Physical Examination:* Heart, præcordial dulness increased; systolic murmur loud at apex. Lungs, nothing abnormal. Abdomen full and generally tender. Dulness in splenic region. No urine could be obtained separately. I knew that a cardiac murmur existed when she was last under my care, three years ago or thereabouts. *Course and Treatment:* Milk and beef-tea diet. Salicylate of soda, fifteen grains every four hours. In consequence of manifest delirium the medicine was stopped after fourth dose, and a simple saline given, with stimulants in small doses frequently. Eighth day of illness.—Highest temperature 100°, lowest 99°; pulse 108; respirations 42. She was less rational, constantly mumbling and talking to herself; passed urine and fæces involuntarily. Parotid region and whole right side of face more swollen; no fluctuation. Great difficulty experienced in administering nourishment, from tight closure of the mouth. Ninth day.—Morning temperature 99·2°, evening 101°; pulse 128; respirations 52. She lay flat upon her back, low in bed. Her left eyelid drooped a little. No other paralysis of motion in arms or legs noticed. She took nourishment better; had had some sleep; was less restless. Seemed to understand what was said to her, but articulated too indistinctly for me to make out what she said. She moved her fingers better, and appeared in less pain, although obviously feebler. Tenth day.—Temperature 101°; pulse 108; respirations 36. Took her nourishment well; had had several short snatches of sleep. Understood what was said to her; put out her tongue, and articulated better. Suddenly, at 3.30 p.m., her breathing became very hurried and her extremities cold. She became first drowsy, then completely unconscious, and died at 7 a.m. on the eleventh day of her illness. *Post-mortem Examination:* Body well nourished; skin a little sallow; muscles dark. The swelling in right parotid was cut into; the tissues were congested, infiltrated with serum, but contained no pus. Several of the joints afflicted with rheumatic pains were incised and examined. Some excess of synovia in right knee, but no purulent fluid. On opening the abdomen some recent lymph was found between liver, spleen, and diaphragm, but there was no general peritonitis. In the thorax there were evidences of old adherent pericardium; old adhesions between bases of both lungs and diaphragm. Lower lobes of both lungs œdematous. All the cavities of the heart were dilated; weight, thirteen ounces and a half. In the left auricle the endocardium was somewhat opaque and roughened, and a patch of softening lymph adhered loosely to its posterior wall. The anterior curtain of the mitral valve was thickened, and presented numerous minute beadings along its edges. There was a patch of soft, easily detached lymph below and between the free edges of two of the aortic valves, and some atheroma of the orifices of the coronary valves, rendering them more patulous than normal. Apart from the multiple embolisms scattered broadcast throughout the viscera, cerebrum, cerebellum, stomach and intestines, liver, kidneys, and spleen, as well as upon the surface of her body, the feature of principal interest was the manner in which the muscular substance of the heart itself was riddled everywhere with tiny embolic infarcta of various sizes, and in various stages of secondary changes towards central softening. *Remarks:* The case may be accepted, I believe, as one of rheumatism, with so-called ulcerative endocarditis, in which fragments of softening lymph detach, and are swept into the current of the circulation, and, as embolisms of the skin, produce the appearances that have led to a so-called separate variety of rheumatism—purpura rheumatica, the peliosis of Schönlein, of which I have published some cases in the *Lancet*. I have seen only a few other cases of rheumatism like it before, in which several purpura spots occurred on the skin, and were especially remarked in the pinnæ of both ears. Such pathological accidents in rheumatic endocarditis are fortunately rare. This disposition of the products of inflammation deposited in the endocardium to break down thus speedily apparently occurs only in peculiar states of the blood of the individual affected by the rheumatism poison. I have already had reason to surmise that the subjects of old ague with enlarged spleens, and the owners of damaged or chronic diseased kidney, when they contract rheumatism, are thus prone to suffer, and to present this fatal clinical complication. This particular case would, I thought, interest the Society, not because it offered much for discussion, and nothing of therapeutic importance, but by reason of its rarity, for I never witnessed such embolism in the heart's muscular tissue—250 were counted by Dr. Norman Moore, who made the autopsy. Further, the accident of two or three quite tiny pin-like infarcta in the cerebral hemispheres, as well as some in the cerebellum, offers a clue to the kind of circulatory disturbance through nerve-centres, which is, perhaps, the central cause of hyperpyrexia, capillary pluggings, and microscopic embolisms of nerve-matter. Lastly, a too patulous condition of the coronary arteries, favouring, as it must, the passage of any fragments of effete matter, microzymes, bacteria, into the heart muscle, may explain the nutritional disturbances of the fibres themselves and the cardiac plexuses.

Amputation through the Hip-Joint.

Dr. William Stokes said that in this case advantage was taken of the facilities afforded for controlling hæmorrhage by means of Mr. Davy's rectal lever, and the best results were thereby obtained. B. P., aged forty-two, tall, muscular, and well nourished, who had been successively a shoemaker, sexton, mason, and cabman, was admitted to Richmond Surgical Hospital, Dublin, August 29, 1879. He then exhibited the signs of advanced coxo-femoral arthritis. He stated that in 1846, being then nine years old, he fell on the left hip. For long after, the injury affected him, and he was attended in hospital by the late Dr. Hutton, and subsequently came again under treatment for three months. At the end of this time, but for a slight halt, he was apparently quite well. In 1852 the joint was again injured, and troubled him during the next five years. In 1878 he was thrown from a car, being then a cab-driver, and was at once taken to hospital in consequence. After seven weeks he went out greatly relieved, but was forced to resume his bed in April last year, and left it only to be conveyed to the hospital. On admission he was deplorably ill. The least motion of the joint caused exquisite pain; even the weight of the bed-clothes was unendurable. Face wore an anxious expression, and there was extreme exhaustion from pain and sleeplessness. Temperature varied between 99° and 102° Fahr. Limb much everted; shortening apparently great, but really only three-quarters of an inch. Three sinuses existed along the outer side of limb, two pointing up and in toward the acetabulum, one downward. Probing the former revealed denuded and softened bone. This could not be felt in the third sinus. From all came a copious,

almost constant, thin, sanious, watery, purulent discharge; a large bed-sore existed over the sacrum. It was necessary to remove the urine twice a day with a catheter. Defæcation caused much distress. Food was not relished nor desired. There were profuse night-sweats. Altogether his condition called for prompt operative interference if life was to be preserved. I considered naturally the relative merits of resection and amputation in this case, and decided against the former in consequence of the great chronicity of the case; the probable (in truth, almost certain) existence of osseous disease below where the section should be made in excision; the age, and utterly exhausted condition from discharge and pain, of the patient. I accordingly determined in favour of amputation at the hip-joint, and the result has fully justified the course adopted. Being much impressed by what I had learned of Mr. Davy's method of preventing hæmorrhage in the performance of this particular amputation, and having regard to the exhausted condition of the patient, being fully sensible of the great importance of diminishing as far as possible the shock of the operation, I determined on adopting the method during the operation. On October 1, I performed the operation. The limb was first elevated for some minutes, an Esmarch's bandage applied, then the patient was etherised, and lastly the lever introduced by Dr. Thomson without difficulty. It was at once interesting and pleasing to observe that on the point of the instrument being brought over the common iliac artery, the slightest elevation of the handle caused a complete cessation of arterial pulsation in the condemned limb. It is not too much to say that the amputation was by this means rendered almost a bloodless one. The operation was done by the formation of an antero-external flap, made by transfixion, and a postero-internal one, made by incision from without inwards. This part of the procedure did not occupy more than a few seconds. The femoral artery was first secured by a carbolised silk ligature, all others by catgut. The strictest antiseptic precautions by Lister's method were observed both during and subsequent to the operation. Immediately after the operation the temperature of patient was 98·8° Fahr., pulse 136, and respirations 32. The pulse being very weak, some brandy with fifteen minims of ether was given, and the pulse became gradually better, though still remaining at 136. Morphia was then given, after which patient slept for some hours. At 10 p.m. the temperature was 99° Fahr., pulse 130, respirations 32. The patient did not complain of pain; there was no sign of hæmorrhage or other trouble. October 2: Passed a quiet night until 5 a.m., when a severe rigor occurred; a second one occurred fifteen minutes subsequently; but these did not recur. 9 a.m.: Temperature 97·6° Fahr., pulse 120, respirations 24; patient complains, but feels otherwise well. 9 p.m.: Patient has slept well for about four hours during the day, and has taken a cup of chicken jelly, also some milk and lime-water. October 3: Has passed a good night, having slept during the greater part of it; temperature 99° Fahr., pulse 112, respirations 24. The wound was dressed; it looked healthy and was quite aseptic. The patient during the day took small quantities of beef-tea, chicken-jelly, and iced milk. From this date the progress to recovery was uninterrupted. The wound remained aseptic for eight days, after which a small amount of suppuration occurred. The femoral ligature separated on the thirteenth day. The following note was taken on the twentieth day after the operation: "Wound dressed to-day; hardly a trace of suppuration. Bed-sore healing rapidly. General state of the patient very satisfactory. Is free from all pain. His appetite is good, and he sleeps well." The patient remained in hospital until the middle of December, when he returned home, the wound having completely healed.

Mr. Howard Marsh said that Mr. Davy's method had been adopted by several surgeons, but was not yet in general sufficiently appreciated. He was fully alive to its value, because, shortly before its introduction, he had seen a patient die from hæmorrhage. The femoral artery had been well secured; but Lister's tourniquet could not be applied to the abdominal aorta, and bleeding from the posterior flap occurred. In another case, occurring soon after, Davy's lever had completely restrained the hæmorrhage. He had heard of no bad results following the use of the instrument, but it should be employed with care.

Mr. Hutchinson thought that many severe cases of hip disease were lost from surgeons' unwillingness to amputate. He had, in four such cases, amputated; in two of them with complete success. The patient's life in one case was certainly saved by amputation. In all these cases, which occurred before the introduction of Davy's lever, he had tied an elastic band tightly round the abdomen, and had washed out the wound with spirit. Listerism had since been introduced, and he should adopt it in any future case, but these four cases had not suffered from the want of it. He had advised amputation in one case, where unwillingness to resort to it had incurred delay, through which the patient had died.

Mr. Mac Cormac thought that, in some severe cases of hip disease and of disease of the femur, amputation was the only procedure which gave hopes of recovery. As to the occurrence of shock after large operations, Langenbeck, speaking chiefly from his experience on the battlefield, had attributed its occurrence chiefly to loss of blood; but, in a case of his own, of amputation at the hip, the patient (a boy) had intense shock, although he had lost scarcely any blood.

Mr. Bryant said that resection in children was comparatively successful, but in adults was frequently fatal. He consequently thought that surgeons should more frequently advise amputation in the advanced hip-disease of adults. He had employed Davy's lever, Mr. Davy himself applying it, with the loss of only two or three ounces of blood, in a case of amputation for tumour of the neck of the femur. As loss of blood was the chief danger to be apprehended, he usually cut down directly upon the femoral artery, cut and twisted both ends at the cut, and then applied a carbolised catgut ligature to the femoral vein.

Dr. Gilbert Smith asked whether the shock produced in Mr. Mac Cormac's case might not have been due to the pressure on the aorta affecting also the solar plexus.

Mr. Mac Cormac said that the pressure had been slight, and that it had been applied just above the umbilicus. He could not think it was sufficient to have affected injuriously the solar plexus.

Mr. Parker had amputated at the hip, in a child thirteen years old, and had found the femoral vein plugged. He could control the arterial hæmorrhage, but could not arrest that from the veins. To it he had attributed the fatal result. Dr. Stokes's case illustrated a remark he (Mr. Parker) had made at a former discussion on hip-joint disease, that sequestra were often found loose in the joint. Had they been removed at an earlier date, possibly the patient might have recovered, and his limb been saved.

Dr. Stokes thought the infrequency of the operation of amputation was due to surgeons' fear for the result; but Mr. Davy's lever had lessened the great risk of a fatal result from loss of blood. The mortality had previously been 50 or 60 per cent. The disadvantages connected with the use of Lister's tourniquet, or Esmarch's bandage, applied round the abdomen over the aorta, were chiefly due to their interference with respiration, which Davy's lever avoided. He thought loss of blood was always present in shock, but did not know that Langenbeck considered it to be the *only* cause. Bleeding was chiefly from the posterior flap in amputations at the hip. If the case had come sooner under his notice, he might have attempted to remove the sequestra from the joint. He did not think the course of the case was entirely due to their presence. The disease was very extensive, implicating not only the head of the femur, but also the acetabulum.

Secondary Hæmorrhage from the Stump of the Thigh.

Mr. W. Harrison Cripps read this paper. The patient, aged sixty-four, was under the care of Mr. Harrison Cripps, Royal Free Hospital. He had been suffering for many years from an ulcer about the ankle, which had recently become the seat of a rapidly growing cancer. The patient being anxious for an operation, the leg was removed below the knee. It was then discovered that the tibial arteries were so brittle from calcareous degeneration that they could be neither tied nor twisted. Thus failing to secure the tibials, Mr. Cripps immediately amputated through the lower third of the thigh. The femoral artery being more readily accessible and less diseased, was secured without trouble. The patient progressed favourably for twenty-eight days. He then had a rise of temperature, and the stump became swollen during the night. He had a violent attack of secondary hæmorrhage. This was restrained by an india-rubber band, but immediately recurred on the band being loosened. Mr. Cripps then tied the femoral artery in continuity three inches above the flaps. Though weak from loss of blood, the patient progressed favourably for thirty days, when he had another sharp attack of hæmorrhage from the seat of the second ligature. This

was treated by setting the stump firmly in a gutta-percha splint, carefully bandaging the stump from below upwards, and applying elastic pressure along the course of the vessel. This pressure was continued for a week, and no more bleeding occurred, but the patient seemed never able to rally from the loss of blood, and died quietly from exhaustion a month after the last attack of bleeding. At the post-mortem examination a firm clot occupied the femoral vessel as high as the profunda. The author then drew attention to the extreme difficulty of dealing with calcareous vessels in amputation below the knee, and considered that the right treatment in such circumstances was a re-amputation further up. In dealing with secondary hæmorrhage from the thigh-stump with degenerate vessels, the author was strongly of opinion that pressure should have a fair trial before adopting other measures. In the case narrated, such treatment appeared effectually to have prevented further bleeding, although the previous ligature of the artery had been unsuccessful.

Mr. Heath thought surgeons could not, before operating, know the condition of the coats of the arteries. For brittle arteries, broad serrated forceps should be used in preference to sharp-pointed forceps, which tore the vessel's coats. Pressure long continued would arrest bleeding; and a limb might be left for a long time blanched without suffering harm from pressure, whilst a clot would be forming in the vessel. It was better not to tie vessels so diseased as those in this case, but to trust to pressure only.

Mr. Bryant also thought it unadvisable that atheromatous vessels should be seized with sharp-pointed forceps. Such a vessel should be seized with broad serrated forceps, and twisted only. The atheromatous material broke up, and the bleeding was arrested. He had employed torsion for years to atheromatous vessels, as to others; and was confident that, if hæmorrhage did not occur within the first few minutes, it would not recur at all. He also left the forceps on the vessel for a minute or so; he broke away no part of the artery, but was careful to twist it only. He was surprised that Mr. Cripps amputated a second time. Pressure along the vessel was the best procedure to adopt.

Mr. Mac Cormac inquired if Mr. Cripps had tried the effect of pressure.

Mr. Cripps said that during the operation the stump had been elevated, without influencing the hæmorrhage. At first he had seized the vessel with ordinary forceps; and at the third trial he had used torsion-forceps; but the vessel had then become short, and had receded. He re-amputated because it seemed impossible to stop the bleeding in any other way. The limb was afterwards swollen and tender; so that he had feared to employ pressure, and had resorted to ligature. He, however, still considered bleeding might ordinarily be best arrested by the use of continuous pressure along the course of the bleeding vessel.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, April 27.

John E. Erichsen, F.R.C.S., F.R.S., President, in the Chair.

Congenital Malformation of the Spinal Column, Bony Thorax, and Left Scapular Arch.

Mr. Willett and Mr. Walsham gave an account of the dissection of the parts removed after death from the body of a woman the subject of congenital malformation of the spinal column, bony thorax, and left scapular arch, with remarks on the probable nature of the defects in development producing the deformities. The following particulars were given of the woman from whom the specimen of deformed thorax was taken:—1. The curvature of the spine had existed since birth. 2. She was a woman of average height, and until uncovered did not present any noticeable deformity. 3. She had given birth to a healthy child. 4. Her mother had a curvature of the spine. 5. When undergoing physical examination of the chest an immobility of the scapula had attracted attention. 6. The immobility of the scapula was found to be due to its union through the medium of a broad bridge of bone with the lower cervical vertebræ. 7. Extremely wide intercostal spaces were noticed; the impulse of the heart's apex being widely diffused and abnormally distinct, as if transmitted through attenuated structures. 8. She was the subject of mitral disease, and died of cardiac dropsy in her thirty-first year. 9. Casts of the deformity taken during life were presented for inspection. The portion of the spinal column preserved deviated from the natural condition—1. In that not only had it lost the posterior convexity, but it had, if anything, a slight anterior curve. 2. There was a sharp lateral curve, with convexity to the left, in the upper dorsal region, corresponding to the absence of the right half of the third dorsal vertebra. 3. There was a longer and slighter compensatory curve in the lower dorsal region. 4. Four and a half of the dorsal vertebræ were missing. The distortion of the thorax corresponded generally to the altered line of the spine. There were five ribs missing on the right, and four on the left side of the chest. The intercostal spaces were abnormally wide. The sternum laid obliquely across the middle line, pointing in its long axis forwards and from right to left; its upper end was only three-quarters of an inch from the spine, its lower end three inches, instead of two and nine inches respectively. The cavity of the thorax was diminished in all its diameters, especially in the antero-posterior in the middle line; whilst this measurement was markedly less on the right side than on the left. The abnormal shape of the thorax in transverse section was well seen in the diagrams made by the aid of Dr. Gee's cyrtometer. The left clavicle deviated notably from the normal; its general direction from the sternum was upwards, forwards, and outwards. It had also a single posterior curve throughout its entire length. The left scapula presented a most remarkable deformity. There was a broad bridge of bone extending from the middle third of the posterior border of this bone, backwards and upwards to the lamina and spinous process of the sixth cervical vertebra. The transverse axis of the scapula was elongated, whilst the vertical was shortened, and the bone appeared rotated forwards, so that the glenoid cavity looked nearly directly forwards, whilst the plane of it was nearly an inch in front of the left sterno-clavicular articulation. The upper border and spine, instead of being directed nearly horizontally outwards from the base, slope downwards and forwards as well as outwards. A detailed description of the malformations of the various bones, and an account of the dissection of the soft parts connected with them, was then given. The absence of the right half of what appeared to be the third dorsal vertebra was the cause of the curvature of the spine. The absence of half a vertebra had generally been ascribed to defects in the process of ossification. The authors thought that the absence was due to changes occurring at an earlier period of development, probably at the time of the primary segmentation of the mesoblastic elements into the protovertebræ. They brought forward several arguments in support of this theory, and referred to many specimens in the museums of the Royal College of Surgeons, St. Bartholomew's and Guy's Hospitals, presenting similar deformities, which, they thought, lent support to their view. The bridge-like portion of bone connecting the spine with the scapula was the chief feature of interest in this specimen. The authors suggested several theories to account for its presence. They classified them under three heads, according as they were based upon one or other of the following hypotheses:—1. That the bone was formed in connexion with the vertebræ, and afterwards became anchylosed to the scapula. 2. That it was originally a scapular element, and secondarily became fused with the spine. 3. That it was formed independently both of the spine and the scapula. On the first hypothesis, the bone might have been (1) an outgrowth of the spinous process or its epiphysis, or (2) an over-development of one of the lateral backward projecting processes called hyperapophysis, developed near the extremity of the spinous process. On the second hypothesis, it might have been an overgrowth of the epiphysis which existed at the posterior border of the scapula; in other words, a supra-scapular bone. The scapular arch consequently presented an example of a reversion to a lower type, viz., that of the skate or the frog tribe. On the third hypothesis, either (1) an ossification of one of the intermuscular planes of connective tissue stretching between the spine and scapula, or (2) a rudimentary scapula, explainable on the theory that the embryo was originally cleft, and that by atrophy and by fusion with the other half one half had disappeared, with the exception of the scapula, which remained as the bridge of bone. The authors at some length discussed the arguments for and against these various theories; that which supposed the bone a supra-scapula they considered the most probable.

A Visitor thought the bone superadded to the scapula a

supra-scapular element. Were it a portion of a suppressed fœtus, other parts should have been found.

Compound Fracture of the Femur.

Mr. Gant read a paper on compound fracture of the femur twenty years after excision of the knee-joint for disease, the line of fracture being transversely one inch above the bony union. The author said that, in considering excision of the knee-joint for disease as an operation having in view the preservation of a useful limb, that result could only be attained by complete synostosis or bony union of the femur and tibia; and as a similar result might be produced by osseous anchylosis, from the natural cure of the disease, that was the true ground for comparison in estimating the result of excision. The comparative merits of bony union and ossific anchylosis must have regard to the functional utility of the limb, for the twofold purpose of support and progression, taking into account also the relative duration of the processes of cure and the risk to life. The author adverted to the process of natural cure in joint disease from all these points of consideration. On the other hand, the practical importance was urged of entirely dissociating joint-excision from amputation of a limb as alternative procedures; and the conditions were specified under which either operation became justifiable in the career of joint disease, having reference principally to the constitutional health of the patient requisite to undergo the different periods of recovery after operation. The history of the case was narrated, its chief features being that a woman aged thirty-three, admitted into the Royal Free Hospital, September 12, 1879, had chronic synovitis of the right knee-joint arising from injury. The duration of the disease was six years. Ulceration of the articular cartilages had ensued, with caries of the adjoining portions of bone and malposition of the leg backwards towards the buttock, thus rendering the limb functionally useless. The constitutional condition, however, was not that of advanced hectic, but one of nervous exhaustion. Excision of the joint resulted in firm osseous union in the unusually short period of two months. A thoroughly useful limb continued for twenty years, during which period the woman often walked several miles a day without any artificial help. She then fell downstairs, and snapped the femur, the bone breaking one inch above the union, and rending the integument open to the extent of some inches across. From the shock of this severe compound fracture, and the collapse due to rather copious hæmorrhage—although without injury to the popliteal artery—the patient never rallied. Section showed complete synostosis of the femur and tibia, and that the bones were fused together, the line of junction being imperceptible. It resisted the extreme violence, aided by the leverage of the leg, which broke the femur across just above the union. Whether anchylosis would have withstood the same amount of force might well be doubted. Thus the cure resulting from surgical interference in joint disease might prove more effectual than that produced by nature; and the limb be rendered far more safely serviceable.

Mr. Holmes said that Sir William Fergusson had advocated the operation of excision of the knee-joint mainly as a substitute for amputation. Mr. Gant's views would greatly restrict the employment of the operation. He believed that it had been too much lauded at first, and was too much neglected now, being much less frequently employed than ten or fifteen years ago. He had performed excision of the knee-joint as a substitute for amputation with good success.

Mr. Gant, in reply, said that he formerly considered excision as a substitute for amputation, but he had changed his opinion. He now thought that it should only be had recourse to when the patient's condition showed that there was not strength enough for recovery, but sufficient to sustain the operation. By the time that amputation had become the only available course, excision was out of the question.

Dislocations, Fractures, and Sprains.—Dr. Dugas, Professor of Surgery in the Medical College of Georgia, believes that it may be useful to lay down certain pathognomonic principles in relation to the diagnosis of injuries of the limbs. He therefore submits the following aphorisms to the consideration of the profession:—1. Fractures produce mobility where there existed none before. 2. Dislocations (except those of the clavicle) impair mobility where it existed before. 3. Sprains and contusions occasion neither increase nor diminution of mobility.—*Amer. Jour. Med. Sciences*, April.

NEW INVENTIONS AND IMPROVEMENTS.

VIN BRUT, OR NATURAL CHAMPAGNE.

(From Messrs. Roper Frères et Cie., Épernay.)

Our readers are well acquainted by this time, with the modern improvements in wine, in lightness, purity, and freedom from alcoholisation. Champagne is often made from white grapes of so much austerity that the ordinary palate welcomes the addition of a little liqueur to sweeten it. Nevertheless, there is no denying the fact that a wine without the combination of sugar and brandy which is called liqueur is better adapted for dyspeptic and gouty persons. Messrs. Roper Frères, recognising this development of public taste, have come forward and challenged the attention of the medical profession for their Vin Brut, or Natural Champagne, which they describe as entirely free from any addition of brandy or sugar. Of all modes of taking alcohol, good sparkling wine is the most effective and most innocent. It is the best remedy for neuralgia and influenza. This clean, dry wine may be prescribed in such cases with confidence and satisfaction.

BURROUGHS' BEEF AND IRON WINE.

This preparation, manufactured by S. M. Burroughs and Co., of Snow-hill, London, is, we think, an entirely new form of medicinal food. It consists essentially of beef extract and citrate of iron dissolved in wine; and to these are added minute quantities of orange, calumba, and gentian. The preparation is consequently decidedly tonic, stimulant, and restorative. It is clear, bright, and pleasant in appearance, and is very palatable, so that children, as well as adults, will take it readily; and it bids fair to become popular. Each tablespoonful of the preparation is said to contains two grains of citrate of iron.

GRANULES OF CALCIUM SULPHIDE.

From Messrs. Newbery, of Newgate-street, we have received some granules of calcium sulphide, prepared by Messrs. W. A. Warner and Co., of Philadelphia. This remedy is now much in vogue, and appears also to be really valuable; but it is not easily met with in a pleasant form. These granules, which are very well made, and contain one-tenth of a grain each of the sulphide, will therefore be welcomed. The same firm prepare also pills containing one-fourth, one-half of a grain, or one grain.

Transfusion with Human Milk.—Dr. Howe, of the Bellevue Hospital Medical College, states that since he first proposed the substitution of milk for blood for transfusion, many trials have been made of the practice both in Europe and America. Some have found it useful, while others, like himself, have been led to consider it a dangerous operation, and one in no degree possessing the advantages of the transfusion of blood. One would have thought from this opinion that at least he would have no more to do with the practice; but he now (*New York Journal of Medicine*, April) narrates a case in which human milk was tried, under the hope that it might succeed better than that of the cow or goat which had been hitherto tried. This, however, gave rise to the same alarming symptoms as attended the use of other forms of milk.

The Porro Cæsarian Operation.—In the *American Journal of Medical Science* for April, Dr. Harris gives an elaborate account of all the cases of the Cæsarian operation with removal of the uterus which have as yet been performed, these amounting in number to thirty-six, from that performed by Prof. Porro, of Pavia, in 1876, to that of Dr. Lucas-Championnière, of Paris, in 1879. No English or American obstetrician has yet performed the operation; and Dr. Harris's object has been to obtain from the various operators the most minute information, in order to enable American obstetrical surgeons to decide upon the propriety of introducing the method into the United States. The general results of the tabular view of the cases are that eighteen women died and eighteen recovered; and that thirty-three children were born living, and four dead. Of the last twenty cases, twelve women recovered and eight died, and eighteen children were delivered alive.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed their primary examinations in Anatomy and Physiology at meetings of the Board of Examiners on the 8th and 10th inst., and when eligible will be admitted to the pass examination, viz.:—

Audland, William E., student of Guy's Hospital.
Barber, Alfred, of St. Thomas's Hospital.
Biggs, Charles E. F., of St. Bartholomew's Hospital.
Collins, William C. G., of St. Bartholomew's Hospital.
Cox, John H., of Guy's Hospital.
Dalton, Arthur J., of Guy's Hospital.
Edmunds, Daniel T., of Guy's Hospital.
Feeney, Michael H., of the Cork School.
Foxwell, Wm. A., B.A. Cantab., of St. Thomas's Hospital.
Harris, Walter T., of Guy's Hospital.
Humphreys, John, of the Glasgow School.
Jefferson, Robert P., of the Leeds School.
John, David, of St. Bartholomew's Hospital.
Kinch, George H., of Guy's Hospital.
Knowles, Herbert W., of the Liverpool School.
Lawrence, Sidney C., of the Birmingham School.
Lipscomb, Edgar R. S., of Guy's Hospital.
Marsh, Nicholas P., of St. Bartholomew's Hospital.
Milnes, John G., of Guy's Hospital.
Phillips, Frank L., of the Birmingham School.
Poulton, Benjamin, of the Melbourne School.
Rudge, Henry T., of the Bristol School.
Rumboll, Charles F., of St. Bartholomew's Hospital.
Ryle, Reginald J., of Guy's Hospital.
Smith, Harry L., of the Glasgow School.
Targett, James H., of Guy's Hospital.
Weakley, Alfred J., of St. Bartholomew's Hospital.
Wheatly, Arthur W., of St. Bartholomew's Hospital.
White, Herbert W., of the Glasgow School.

Nineteen candidates were rejected. The following passed on the 11th inst., viz.:—

Baillie, Robert A., student of Guy's Hospital.
Berry, John B., of Guy's Hospital.
Bush, Francis A. A., of Guy's Hospital.
Carlyon, Edward T., of St. Bartholomew's Hospital.
Carnelley, Matthew, of Guy's Hospital.
Clarke, Albert B., of the Charing-cross Hospital.
Clarkson, Herbert G. H., of the Leeds School.
Clarkson, Thomas J. R., of the Leeds School.
Coopland, Herbert C., of St. Bartholomew's Hospital.
Ellison, William A., B.A. Oxon., of St. George's Hospital.
Etches, William R., of Guy's Hospital.
Gavey, E. H. M., of St. Bartholomew's Hospital.
George, William H., of St. Bartholomew's Hospital.
Gibson, John H., of Guy's Hospital.
Keatinge, Henry P., of Guy's Hospital.
Sells, Hubert T., of Guy's Hospital.
Spicer, Frederick, of St. Bartholomew's Hospital.
Trevor, Edward T., of Guy's Hospital.
Waring, John A., of St. Bartholomew's Hospital.
Wright, John L., of St. Bartholomew's Hospital.

Four candidates were rejected. The following passed on the 12th inst., viz.:—

Davies, Henry A. B., student of Guy's Hospital.
Green, George R., of Guy's Hospital.
Gunn, Bassett C. E. F., of University College Hospital.
Marjoribanks, William F., of St. Mary's Hospital.
Moorhouse, Benjamin M., of Guy's Hospital.
Muirhead, Michael A., of Guy's Hospital.
Nance, Arthur S., of St. Bartholomew's Hospital.
Newton, Rupert W., of St. Bartholomew's Hospital.
Robinson, Hugh S., of the London Hospital.
Rygate, John R., of the London Hospital.
Shelley, Robert H., of the Charing-cross Hospital.
Shillingford, Frank N., of Guy's Hospital.
Simmons, Herbert C., of St. Bartholomew's Hospital.
Tomalin, William J. C., of Guy's Hospital.
Trinder, Alfred B., of St. Bartholomew's Hospital.
Williams, Roger de la H., of St. Bartholomew's Hospital.

Eight candidates were rejected. The following passed on the 13th inst., viz.:—

Anderson, Langford McE., student of Guy's Hospital.
Dovaston, Milward E., of University College Hospital.
Ellis, William G., of St. Bartholomew's Hospital.
Haward, Alfred, of St. Bartholomew's Hospital.
Kershaw, John C., of the Leeds and Middlesex Hospitals.
Moore, William H., of Guy's Hospital.
Plimmer, Henry G., of Guy's Hospital.
Spiller, Walter C., of Guy's Hospital.
Salvage, John V., of Guy's Hospital.
Wright, Holland H., of Guy's Hospital.

Ten candidates were rejected.

Primary Examinations.—The following were the questions on Anatomy and Physiology submitted to the 157 candidates for the diploma of membership on the 7th inst., when, under the recent regulations, they were required to answer only four out of the six questions in each division, viz.:—Anatomy: 1. Describe the inferior maxilla, and state the changes it undergoes from infancy to old age. 2. Describe the inferior radio-ulnar and the radio-carpal articulations; state the movements of which they are capable, and name the muscles by which these movements are effected. 3. Describe the course, relations, and anastomoses of the external circumflex artery, and give the dissection necessary to expose it. 4. Describe the entire lachrymal apparatus. 5. Describe the membranes of the spinal cord, and mention the points of difference between them and the membranes of the brain. 6. Describe the course and relations of the inferior vena cava, and name its tributaries. The following were the questions ou Physiology, viz.:—1. Describe the structure of the mucous membrane of the stomach. Give the composition and action of the gastric juice. 2. What are the essential parts of a secreting gland? What circumstances modify secretion? Illustrate your statements by reference to the salivary and sudoriparous glands. 3. Describe the structure of the urinary bladder. What muscles and nerves are engaged in the act of micturition? 4. Describe the structure and functions of the vocal cords. Enumerate the intrinsic muscles of the larynx, giving the nerve-supply and action of each. 5. Give the structure and connexions of the valves of the heart. What are their functions? 6. Describe the structure of striated muscle. Give the physical and chemical changes which accompany the act of contraction.

Collegiate Lectures.—The following is the programme of Professor Butlin's lectures to be delivered in the Theatre of the College at four o'clock on June 2, 3, and 4:—Lecture I.: Introduction; advantage of anatomical method of classification; epithelial origin of carcinoma; definition of carcinoma; definition of sarcoma; doubtful cases; varieties of sarcoma of the testis; varieties of carcinoma of testis; cases illustrative of each disease; characters of agreement between sarcoma and carcinoma; characters of difference; the latter as marked between varieties of sarcoma as between sarcoma and carcinoma; absence of glandular affection in certain cases; discussion of relation between cartilaginous tumours and tumours containing cartilage. Lecture II.: No primary carcinomas of bone; general division of bone-sarcomas into subperiosteal and central; varieties of subperiosteal sarcomas; disadvantage of the terms "osteoid sarcoma," "osteoid chondroma," etc.; simplicity of nomenclature desirable; sarcomas considered in relation to each bone affected —femur, tibia, etc. Lecture III.: Myeloid tumours; remarks on nature and signification of giant-cells; central sarcomas cousidered in relation to particular bones affected—femur, tibia, etc.; multiple sarcomas of bone; summing-up of important features of central and subperiosteal tumours; age, pulsation, situation of tumours, radiating structure, glandular affection, operation.

ROYAL COLLEGE OF SURGEONS, EDINBURGH.—The following gentlemen passed their First Professional Examination for the Licence in Dental Surgery of the College:—

Durward, James Stewart, Edinburgh.
Stewart, James, Perth.

APOTHECARIES' HALL, LONDON.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, May 6:—

Johnston, Edward Cocks, Birmingham.
Jones, William Clay, Llyswen, Breconshire.
Routh, Armand Jules McConnel, Montagu-square, W.
Savill, Thomas Dixon, St. Thomas's Hospital.

The following gentleman also on the same day passed his Primary Professional Examination:—

Thomas, John Lloyd, Queen's College, Birmingham.

BIRTHS.

BEADLES.—On April 25, at Park House, Dartmouth-park, Forest-hill, S.E., the wife of Arthur Beadles, M.R.C.S., of a son.

CLARKE.—On April 11, at Somerset East, South Africa, the wife of T. F. Clarke, M.R.C.S., of a daughter.

GARRETT.—On May 5, at Kenmare House, Walsall, the wife of Charles Frederick Garrett, M.R.C.S., L.S.A., of a son.

IRONSIDE.—On May 6, at Piershill, Edinburgh, the wife of Surgeon-Major W. Ironside, A.M.D., of a son.

MCDONALD.—On February 26, at Hamilton, Tasmania, the wife of Wallis McDonald, M.R.C.S., of a daughter.

PHILPOT.—On May 2, at Moorcroft, Parkstone, Dorset, the wife of John R. Philpot, L.R.C.P., L.R.C.S., of a son.

MARRIAGES.

EBERLE—HOBSON.—On May 1, at Hornby, near Bedale, Yorkshire, John James Eberle, L.R.C.P., Physician to the Medical College, Easingwold, Yorkshire, to Lucy Elizabeth, eldest daughter of Joseph Hobson, Esq., of the same place.

EMBLETON—WATERLOW.—On May 11, at St. Marylebone, Dennis Cawood Embledon, M.R.C.S., of Harworth-upon-Tees, Durham, to Eva Christina Jameson, fifth daughter of A. J. Waterlow, Esq., of 25, Park-crescent, Portland-place, and 24, Birchin-lane, London.

DEATHS.

ALDER, SYDNEY, Surgeon-Major A.M.D., late of the 23rd (Royal Welsh) Fusileers, at East Dulwich, on May 8, in his 51st year.

BUTLER, SOPHIE WILHELMINA, second daughter of William Ross, M.D., Fleet Surgeon R.N., at 46, Highgate-road, N.W., on May 6, aged 23.

CAMPBELL, CHARLES COPLAND, second son of D. C. Campbell, M.D., of Warley, Essex, at Port Elizabeth, South Africa, on April 10, aged 20.

GRIFFIN, MARIA, wife of John Griffin, M.D., at The Green, Banbury, on May 8, aged 65.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

ALNWICK INFIRMARY.—House-Surgeon. (*For further particulars see Advertisement.*)

CENTRAL LONDON SICK ASYLUM DISTRICT.—Principal Medical Officer. (*For further particulars see Advertisement.*)

NOTTING-HILL PROVIDENT DISPENSARY.—House-Surgeon. Applications, with testimonials, to be sent to the Hon. Secretary, W. P. Collins, Esq., 8, Pembridge-gardens, Notting-hill, W., on or before May 25.

ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY, WIGAN.—Junior House-Surgeon. Candidates must have two qualifications, and be prepared to enter into an agreement not to practise in the Wigan Union for a period of three years. Applications, stating qualifications, etc., with testimonials, to be sent to the Secretary, Will Taberner, Esq., on or before May 29.

ROYAL FREE HOSPITAL, GRAY'S-INN-ROAD.—Junior Resident Medical Officer. Candidates must possess a medical or surgical qualification from one of the Examining Boards of the United Kingdom. (*For further particulars see Advertisement.*)

ROYAL FREE HOSPITAL, GRAY'S-INN-ROAD.—Senior Resident Medical Officer. Candidates must possess a medical or surgical qualification from one or more of the Examining Boards of the United Kingdom. (*For further particulars see Advertisement.*)

ROYAL ISLE OF WIGHT INFIRMARY, RYDE.—House-Surgeon and Secretary. Candidates must be legally qualified. Applications, with testimonials, to be sent to Bonner H. Mumby, M.B., House-Surgeon and Secretary, on or before May 18.

ST. PETER'S HOSPITAL, 54, BERNERS-STREET, W.—House-Surgeon. (*For further particulars see Advertisement.*)

SHEFFIELD GENERAL INFIRMARY.—House-Surgeon. (*For further particulars see Advertisement.*)

THE BELGRAVE HOSPITAL FOR CHILDREN, 79, GLOUCESTER-STREET, S.W.—Physician. Candidates, who must be graduates in medicine of a British university, and Fellows or Members of the Royal College of Physicians, are requested to communicate, in writing, with the Hon. Secretary, at the Hospital, on or before May 30.

THE BELGRAVE HOSPITAL FOR CHILDREN, 79, GLOUCESTER-STREET, S.W.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to be sent to the Hon. Secretary, at the Hospital, on or before May 30.

TORBAY HOSPITAL AND PROVIDENT DISPENSARY, TORQUAY.—Junior House-Surgeon and Dispenser. Candidates must be qualified in medicine and surgery, registered under the Medical Act, and unmarried. Testimonials to be sent to the Hon. Secretary, W. H. Kitson, Esq., Hemsworth, Torquay, on or before May 22.

UNIVERSITY COLLEGE HOSPITAL.—Resident Medical Officer. Applications, stating age and qualifications, together with testimonials, to be sent to Talfourd Ely, Esq., University College, Gower-street, W.C., not later than May 18.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Birmingham Parish.—Dr. Robert Blake McVittie has resigned the Cottage Homes School at Marston-green: salary £100 per annum. Also the Floodgate-street Branch Workhouse: salary £2 2s. a week.

Hastings Union.—Mr. E P. Thurston has resigned the Third District: area 10,293; population 4281; salary £115 per annum.

Leicester Union.—Mr. Julius St. Thomas Clarke has resigned the Workhouse: salary £120 per annum.

West Derby Union.—Dr. W. O. Deacon has resigned the Mill-road Workhouse: salary £120 per annum.

APPOINTMENTS.

Birmingham Parish.—Alexander C. Suffern, M.D., M.C. Queen's Univ. Ire., as Assistant Medical Officer at the Workhouse.

Crediton Union.—Frederick J. Parsons, L.R.C.P. Edin., M.R.C.S. Eng., L.S.A., to the Morchard Bishop District.

Leigh Union.—Thomas D. Paradise, M.R.C.S. Eng., L.S.A., to the Lowton District and the Workhouse.

Romsey Union.—Richard A. Ross, M.R.C.S. Eng., L.S.A., to the Sherfield District.

St. Giles, Camberwell, Parish.—Theodore F. P. Adolphus, M.R.C.S. Eng., L.S.A., as Assistant Medical Officer at the Workhouse and Infirmary.

Salford Union.—John T. C. Conry, L.K.&Q.C.P. Ire., L.F.P.&S. Glasg., as Assistant Medical Officer at the Workhouse.

Toxteth Park Township.—Nathaniel E. Roberts, B.M. and M.C. Edin., as Assistant Medical Officer at the Workhouse.

Wangford Union.—Joshua K. Womersley, M.R.C.S. Eng., L.S.A., to the Bungay District.

Wetherby Union.—Percy A. Steedman, L.R.C.P. Lond., M.R.C.S. Eng. to the Harewood District.

THE REV. WILLIAM ROGERS, M.A.—The many friends of this highly respected clergyman will regret to hear that notwithstanding the unremitting care and attention of his regular medical attendant, Mr. Jenner, of Baldock, Herts, together with Sir James Paget and Mr. Durham, he still continues in a precarious condition.

GUY'S HOSPITAL.—We are requested to announce that it is proposed by some of the old students to hold a meeting at Willis's Rooms on Friday next, which will take place half an hour before the commencement of the Guy's Hospital biennial dinner, in order that the old Guy's men there assembled may have an opportunity of expressing their sympathy with the members of the medical and surgical staff of the Hospital under present circumstances, and their continued confidence in the staff's conduct of the affairs of the medical school of Guy's Hospital. All former students of the Hospital are invited to attend.

THE DREADNOUGHT HOSPITAL, GREENWICH.—At a recent annual meeting of this Hospital, the President, his Royal Highness the Duke of Edinburgh, drew attention to the fact that on the previous Christmas-day the representatives of between forty and fifty nationalities sat down to dinner at the same table. This statement excited the interest of an artist of promise, Mr. John C. Dollman, who has represented the scene in a picture entitled "Friends in Adversity," No. 471 of the present Royal Academy Exhibition. The figures in this picture are all portraits from life, and the motley assemblage is likely to excite the attention of all who take an interest in anthropology.

EFFECT OF TOBACCO ON THE EYES.—In the *New York Medical Journal* for April, Dr. Ely gives an account of an investigation which he had made as to the condition of the eyes in 102 workers in tobacco, most of whom were also great smokers. Of these 88 were found to have normal vision. Of the 15 who had defective vision in one or both eyes, there seemed to be no reason to attribute the amblyopia in 13 of the number to tobacco; in 2 only could it be fairly attributed to this, no positive proof existing, however, that it was so. Of the 102 operatives, 59 had been working on tobacco for upwards of ten years, 12 of the number being forty years of age and upwards, and 47 thirty or more. The list included 9 women, all of whom had good vision. "My own impressions, gathered from these examinations, as well as from other experience, are that tobacco has of itself only a comparatively slight influence in impairing vision; that working in tobacco is as healthful as most other sedentary occupations; that in certain persons peculiarly susceptible to it, or when combined with other noxious influences, it may impair the vision or general health, just as has been claimed for it; and that constant contact with it, as with other poisons, may beget a tolerance of it sufficient to controvert all theory."

COMPOSITION AND QUALITY OF THE METROPOLITAN WATERS IN APRIL.—The following are the returns (by Dr. Meymott Tidy) of the Society of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, etc.	Nitrogen: As Nitrates, etc.	Ammonia.		Hardness. (Clarke's Scale)	
				Saline.	Organic.	Before Boiling.	After Boiling.
Thames Water Companies.	Grs.	Grs.	Grs.	Grs.	Grs.	Degs.	Degs.
Grand Junction ...	19·64	0·050	0·142	0·000	0·005	14·3	3·3
West Middlesex...	19·23	0·021	0·151	0·000	0·008	13·8	3·3
Southwark and Vauxhall ...	20·04	0·066	0·142	0·002	0·010	14·3	3·8
Chelsea	20·11	0·008	0·151	0·000	0·004	14·0	3·3
Lambeth	20·82	0·054	0·167	0·000	0·008	14·3	3·8
Other Companies.							
Kent	30·63	0·004	0·203	0·000	0·0025	20·6	5·6
New River ...	19·59	0·016	0·151	0·000	0·005	13·8	3·3
East London ...	21·75	0·028	0·151	0·000	0·006	14·3	4·2

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours. The water was found to be clear and nearly colourless in all cases but the following, when it was turbid—namely, in that of the West Middlesex Company.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Beta, Bucks.—Any name can be changed by advertisement in the public newspapers. Consult your solicitor as to the form and repetition of the advertisements, and as to any payments that may be necessary.

The Water Cure.—Mr. Charles Hawkins draws attention to an earlier date than is generally assigned to the institution of the so-called "water cure." Long previously to Preisnitz, a letter from the Hon. Horace Walpole says: "Dr. Heberden, as every physician to make himself talked of will set up some new hypothesis, pretends that a damp house and even damp sheets, which have ever been reckoned fatal, are wholesome. At *Malverne* they certainly," adds Walpole, "put patients into sheets just dipped in the spring."

Liberality.—In the last annual report of St. George's Hospital, which has just been published, it is stated amongst the donations that in twelve years Miss Gordon, who sends £400, has given the large sum of £5500, exclusive of an annual subscription of £100.

The Premier.—In the Paris *Figaro*, in a long article on Mr. Gladstone, the writer, *inter alia*, states: "He rises early and is very abstemious. He chiefly eats fish, because that diet stimulates the brain. He takes two glasses of Bordeaux, because that wine is a tonic of the cervical matter. He takes one glass of port, because that is the orator's wine. He puts on his stout wooden-soled boots, with nails as big as those on old church doors, takes an axe, and the Prime Minister becomes a wood-cutter."

Temperance Items.—From the annual report, just issued, of the total abstinence section of the Church of England Temperance Society, as distinguished from the parent society, which includes non-abstainers as well as abstainers, it appears that the Society numbered 219,102 members, and that there were 10,000 abstaining soldiers in England, and a like number in India.——A coffee-tavern situate in Sun-street, City, known as the "Sun Coffee Tavern," has just been opened.——The Brighton Coffee-house Company have opened their second "palace." The premises occupy a commanding position at the extreme western portion of the town.——In the Board of Trade reports lately published it is officially certified that in 1878 £142,188,900 was spent by the British people in drink, but in 1879 the consumption of intoxicating liquor decreased to £128,143,864. Last year, therefore, shows a diminution in drink by £14,045,036 in value, or 9·8 per cent. less in liquor than in 1878. Moreover, with the decrease in the consumption of alcoholic drinks, there has been progressing, since 1878, a most striking increase in the consumption of non-intoxicants. The use of coffee among the people has become more general by 3·9 per cent. The consumption of tea has been augmented by 1·9, and that of cocoa by 1·3 per cent.——The *Daily Commercial Bulletin*, a New York journal, gives some statistics which show that the consumption of coffee has increased by nearly 50 per cent. during the past quarter of a century. This consumption, proportionately to the population, is greatest in Holland, the Dutch using nearly 18 lbs. per head per annum, Belgium comes next with 9 lbs. per head, Norway with 8½ lbs., and the United States with 8¼ lbs.; while France, which consumed only 1½ lb. per head in 1856, now consumes 4¼ lbs., Germany 3 lbs., and Great Britain only 1 lb. per head.——The Executive of the Church of England Temperance Society have laid down the following principles of legislation, upon which they are prepared to act:—1. That the liquor traffic cannot properly be prohibited. 2. That it is the duty of the State to regulate and control it. 3. That the licence to sell being a monopoly, should be disposed of for its fair value. 4. That the sale being for the accommodation of the people, the people themselves should have a voice in defining the limits of the traffic. The Executive, through Sir Harcourt Johnstone, Bart., M.P., Mr. Hugh Birley, M.P., and others, intend to introduce a Bill into the House of Commons this session, dealing with the question upon the above principles.

The Gaelic Chair, Edinburgh University.—We understand it has been decided to postpone the formal instituting of this Chair till next year, in the hope that the funds for the endowment of the professorship will be considerably increased.

An Example.—The Liverpool School Board has resolved to give instruction in practical cookery in the schools under their charge. A specially qualified teacher is to be appointed, at a salary of £80 per annum, to superintend the classes.

Opium: Persia.—Consul-General Ross, in his recently published report on the trade and commerce of Persia, states that during the last two years the Persians have manifested remarkable activity in extending and improving the cultivation and growth of opium. Previous heavy losses owing to the drug being badly prepared and adulterated, and the large profits which they found were obtainable from better produce, have induced more care in its cultivation and preparation, and chests are occasionally examined by experts in order to put a check upon adulteration. Five years ago the annual produce of opium in Persia was only about 2000 cases. In 1878-79, however, the ont-turn is stated to have been 6700 cases, and the yield of the crops is estimated at about the same quantity for the present year.

The Right of Surgeons to Recover in Medical Cases.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—The other day, in the Leeds County Court, a surgeon sued a patient for medical attendance, with the result of being nonsuited by the judge on the ground of insufficient qualification. From this decision it appears that some of the brightest ornaments of our profession, including Sir James Paget, the distinguished dermatologist Erasmus Wilson, and others, are legally incompetent to discharge the duties, if so disposed, of a wide and important field of practice. Besides, in actions of this kind, who is to decide between what is strictly medical and surgical?—for although, I presume, a surgeon might not recover fees in a case of typhus, his claim in one of eczema would be universally admitted. I am, &c.,

Park-place, Leeds, May 4. Clarence Foster, M.R.C.S.

A Recalcitrant Poor-law Guardian.—By order of the Brighton Board of Guardians, a member of the Board (who was elected at Easter as an anti-vaccinationist) has been summoned for neglecting to have his last child vaccinated. He did not appear, and the usual order was made for the child to be vaccinated.

Young Medical Officers' Training, Aldershot Camp.—The Director-General of the Army Medical Department has held an official inspection of the Army Hospital Corps and a number of young medical officers who are undergoing a course of instruction at the Aldershot camp. The latter were tested as to their knowledge of drill, the care of and attendance to the wounded on the field, and other general duties. Of the practical training and instruction which the officers had received the Director-General expressed himself well satisfied.

Urban and Rural Sanitary Works.—In the parishes of Chelsea considerable improvements are proposed, by the formation of a wide thoroughfare from the new houses in Sloane-square to Sydney-place, leading into Onslow-square. Part of the scheme is to appropriate the whole of the disused churchyard of St. Luke's, Chelsea, into a pleasure-ground. New blocks of buildings are to be erected for the displaced poor.——The Town Council of Accrington are providing new public recreation-grounds at Milnsham for the use of the townspeople. The grounds comprise six acres. The estimated outlay is £2500.——The Town Council of Carmarthen have resolved to obtain an additional supply of water, at an estimated outlay of £3000.——A Local Government Board inquiry has been held at Horley, Sussex, on an application from the Reigate Rural Sanitary Authority for power to acquire certain lands for the proposed sewerage works for the parish of Horley.——At Brighton, a Local Government Board inquiry has been held for sanction to borrow £5000 for the purchase of a site for a sanatorium proposed to be erected on the downs.——The Manchester Town Council, in reply to a memorial, numerously and influentially signed, in favour of a proposal to purchase the Manley Hall Estate at a cost of £50,000, and convert it into a public park, has informed a deputation that the Council will at an early date consider the question.——At Hampton-on-Sea, the new Kentish watering-place, the laying out and planting the recreation-ground has been commenced.——The scheme dealing with two areas in the town of Brighton condemned as unhealthy is estimated to cost £70,182.—A new cemetery has been opened at Staines.——Mr. Hawkesley, C.E., the engineer to the Bridgwater Waterworks, has given a final certificate as to the completion of the works. The supply has been laid on, and many of the houses are being connected with it. The cost of the works has been about £40,000.

Whipping of Boys by a Magistrate's Order, and Medical Fees.—A regulation just issued from the Home Office came into operation a few days since as to a magistrate's adjudging in certain cases a mild whipping of boys. A surgeon is to be called in whenever a little boy is to be whipped, and the birching (limited by 42 and 43 Vict., cap 49, sec. 10, to six strokes) is to be administered before a duly qualified medical man. The scale of remuneration is—superintending one little boy being whipped 5s., and for every succeeding boy 3s. 6d.

COMMUNICATIONS have been received from—

The Registrar of Apothecaries' Hall, London; The Secretary of the Seamen's Hospital Society, Greenwich; The Editor of "Iron"; The Registrar-General for Scotland; The Agent-General for New South Wales; Mr. E. L. Hussey, Oxford; Dr. C. Meymott Tidy, London; The Secretary to the Pharmaceutical Society of Great Britain; Dr. A. H. F. Cameron, Liverpool; The Secretary of the Royal College of Surgeons, Edinburgh; Dr. James Irving, Tunbridge Wells; Mr. R. W. Parker, London; Dr. F. Willoughby, London; Professor Flower, London; Mr. Hamilton Craigie, London; Dr. Carter, Liverpool; The Secretary of the Royal Institution; Mr. W. D. Wilkes, Salisbury; Mr. J. B. Blackett, London; The Secretary of the Great Eastern Railway; Dr. John Clay, Birmingham; Dr. Cornelius B. Fox, Ilfracombe; The Hon. Secretary of the Harveian Society; Messrs. Richardson and Co., London; Mr. Thos. W. Crosse, Norwich; The Secretary of the Royal Medical and Chirurgical Society; Mr. J. Chatto, London; The Secretary of the Pathological Society; Mr. T. M. Stone, London.

BOOKS, ETC., RECEIVED—

Manual for the Physiological Laboratory, by Vincent Harris, M.D., M.R.C.P., and D'Arcy Power, B.A.—Hay Fever, by Charles Harrison Blackley, M.D.—How to Feed an Infant, by Benson Baker, M.D.—A Guide to the Examination of the Urine, by J. Wickham Legg, Esq.—General Paralysis of the Insane, by Wm. Julius Mickle, M.D., L.R.C.P.—The Pharmacopœia of the British Hospital for Diseases of the Skin, by Balmanno Squire, M.B.—Watering-places of Germany, Austria, and Switzerland, by Edward Gutmann, M.D.—Health, by W. H. Corfield, M.A., M.D., F.R.C.P.—The Mechanism of the Human Voice, by Emil Behnke, Esq.—Researches of Hearing through the Medium of the Teeth and Cranial Bones, by Chas. Hermon Thomas, M.D.—A New Study of

Cerebral Cortical Localisation, by R. W. Amidon. A M., M.D.—On the Removal of Foreign Bodies from the Eye, by Chas. Stedman Bull, M.D. —Des Abcès Chauds de la Prostate, par le Dr. Paul Segond—Tables of the Physiological Action of Drugs, by E. A. Morshead, M.R.C.S., L.R.C.P.—On Insufficiency of the Aortic Valves, by John Cockle, A.M., M.D.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Centralblatt für die Medicinischen Wissenschaften—Nature—Revue Médicale—Occasional Notes—Gazette Hebdomadaire —Louisville Medical News—El Siglo Medico—Analyst—Practitioner—Western Daily Press, May 7—Night and Day—British Mail—North Carolina Medical Journal—Therapeutic Gazette—Philadelphia Medical Times—Centralblatt für Gynäkologie—Medical Enquirer—Archives of Dermatology—Deutsche Medicinal Zeitung—Yorkshire Post, May 8—Canadian Journal of Medical Science—New York Medical Journal—Students' Journal and Hospital Gazette.

APPOINTMENTS FOR THE WEEK.

May 15. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

Royal Institution, 3 p.m. Prof. H. Morley, "The Dramatists before Shakespeare."

17. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

18. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Royal Institution, 3 p.m. Mr. Fiske, "American Political Ideas."

Pathological Society, 8½ p.m. Dr. Thin—Specimen illustrating the Development of Cancer. Dr. Hoggan—Specimens illustrating the Histology of Painful Subcutaneous Tumour. Mr. Gay—Recurrent Mammary Tumour. Dr. Norman Moore—Aortic Aneurism opening into Right Auricle. Dr. F. Taylor—Cirrhosis of Liver in a Child. Dr. H. Port—Dermoid Tumour from the Rectum. Mr. Shattock—Mixed Cystic Oxide and Lime Oxalate Calculus. Mr. Walsham—Left Persistent Vena Cava. Dr. Pye-Smith—Aneurism of the Abdominal Aorta and Right Common Iliac Artery communicating with the Inferior Vena Cava. Mr. Eve—Kidneys showing the Cystic Degeneration of Adults. Dr. Barlow—Congenital Syphilitic Ulceration of the Tongue. Dr. Abercrombie—Three Cases of Sarcomatous Growths in both Kidneys. Dr. Stephen Mackenzie—Congenital Malformation of the Heart. Mr. MacCarthy—Tumour of the Face. Dr. Ralfe—Remarkable Renal Concretions. Mr. J. T. MacMahon—1. Cancer surrounding the Colon; 2. A Double Kidney.

19. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Lister), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.; National Orthopædic, Great Portland-street, 10 a.m.

Guild of St. Luke (59, Mortimer-street, Cavendish-square), 7½ p.m. The Rev. Malcolm MacColl, "On Physical Theology."

Association of Surgeons Practising Dental Surgery (Council Meeting, 7.30 p.m.), 8½ p.m. Casual Communications from the President and others. Mr. W. D. Napier will exhibit the Polyscope for Illuminating the Mouth by Electric Light, and also a New Apparatus for the Administration of Nitrous Oxide without the Risk of the Gas Running Short.

20. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

Royal Institution, 3 p.m. Mr. T. W. R. Davids, "Buddhist Sacred Books."

National Health Society (Hertford-street), 4 p.m. Professor E. Ray Lankester, "On Germs—Unseen Enemies."

Harveian Society, 8½ p.m. Mr. G. P. Field, "An Analysis of 500 Cases of Perforation of the Membrana Tympani." Dr. Mahomed, "On Bronchitis."

21. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

Royal Institution (Council Meeting, 8 p.m.), 9 p.m. Mr. Spottiswoode "Electricity in Transitu."

VITAL STATISTICS OF LONDON.

Week ending Saturday, May 8, 1880.

BIRTHS.

Births of Boys, 1437; Girls, 1386; Total, 2823.
Corrected average in the 10 years 1870-79, 2612·6.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	755	661	1614
Average of the ten years 1870-79, corrected to increased population	802·6	746·8	1549·4
Deaths of people aged 80 and upwards ...	...	...	48

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa
West	561359	...	7	5	2	9	...	2	1	1
North ...	751729	3	4	8	1	17	2	...	...	4
Central ...	334369	...	2	2	1	10	1	2	1	1
East	639111	1	...	19	1	11	1	4	...	2
South	967692	6	9	33	10	20	1	5	1	5
Total	3254260	10	22	67	15	67	5	13	3	13

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·810 in.
Mean temperature	47·1°
Highest point of thermometer	62·4°
Lowest point of thermometer	31·5°
Mean dew-point temperature	40·7°
General direction of wind	N.E. & E.N.E.
Whole amount of rain in the week	0·17 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, May 8, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1880.*	Persons to an Acre. (1880.)	Births Registered during the week ending May 8.	Deaths Registered during the week ending May 8.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Centimetres.
London	3664149	48·6	2823	1416	62·4	31·5	47·1	8·39	0·17	0·43
Brighton	107321	45·6	59	37	61·7	37·4	47·3	8·50	0·05	0·13
Portsmouth ...	134224	29·9	92	43	...	...	...	...	...	...
Norwich	85827	11·5	55	35	56·5	38·0	45·3	7·39	0·05	0·13
Plymouth	74993	53·8	52	55	63·7	36·4	49·9	9·94	0·31	0·79
Bristol	213536	48·0	151	84	61·0	33·0	47·3	8·50	0·04	0·10
Wolverhampton ...	75970	22·4	59	34	62·2	34·9	46·6	8·12	0·00	0·00
Birmingham ...	394738	47·0	336	143	...	...	...	...	...	...
Leicester	129912	40·6	100	44	64·8	36·0	47·1	8·39	0·02	0·05
Nottingham ...	173827	17·4	135	78	68·1	35·1	47·5	8·61	0·08	0·20
Liverpool	544056	104·4	385	261	...	...	...	...	...	...
Manchester ...	363130	84·6	262	195	...	...	...	...	...	...
Salford	185786	35·9	154	108	...	...	...	...	...	...
Oldham	115413	24·7	92	36	...	...	...	...	...	...
Bradford	197196	27·3	117	83	60·0	34·6	45·2	7·33	0·02	0·05
Leeds	318929	14·8	228	115	63·0	35·0	46·5	8·06	0·00	0·00
Sheffield	304938	15·5	196	147	62·0	33·0	44·5	6·95	0·08	0·20
Hull	149627	41·2	106	45	57·0	32·0	43·8	6·56	0·26	0·66
Sunderland ...	116730	42·2	86	46	61·0	39·0	47·0	8·33	0·00	0·00
Newcastle-on-Tyne	149366	27·8	83	48	...	...	...	...	...	...
Edinburgh	229839	54·8	158	97	59·0	32·9	47·0	8·33	0·10	0·25
Glasgow	589598	97·7	390	303	63·0	38·0	49·3	9·61	...	...
Dublin	314666	31·3	194	220	59·3	32·0	45·9	7·72	0·00	0·00
Total of 23 Towns in United Kingdom	8633571	39·2	6313	3673	68·1	31·5	46·7	8·17	0·08	0·20

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·81 in. The lowest reading was 29·51 in. on Monday afternoon, and the highest 30·04 in. at the end of the week.

* The figures for the English and Scottish towns (except for Nottingham, Salford, and Oldham) are the numbers enumerated in April, 1871, raised to the middle of 1880 by the addition of nine years and a quarter's increase, calculated at the rate which prevailed between 1861 and 1871. Revised estimates have been adopted for Nottingham, Salford, and Oldham, based upon special returns of inhabited houses existing within those boroughs. the population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

THE LUMLEIAN LECTURES

ON THE

DIGESTIVE FERMENTS AND THE PREPARATION AND USE OF ARTIFICIALLY DIGESTED FOOD.

Delivered before the Royal College of Physicians.

By WILLIAM ROBERTS, M.D., F.R.C.P., F.R.S.,
Physician to the Manchester Royal Infirmary;
Professor of Clinical Medicine to the Owens College.

Lecture III.—Part I.

The suggestion to administer to invalids artificially digested food appears at first sight a somewhat startling proposal. So great an interference with the order of nature would seem to go beyond the legitimate province of art. But when we reflect how largely art already interferes in the preparation of our food, the taking of this further step will appear less surprising. The practice of cooking is in reality as complete a departure from the ways of untutored nature as artificial digestion would be. Among the almost countless species of animals, not one of them, except man alone, cooks his food, insomuch that man has, not inaptly, been defined as "the cooking animal."

Effects of Cooking.—The process of cooking fulfils far more important ends than that of improving the savour of food—far more important even than the mechanical disintegration which generally attends the process. It produces certain chemical changes in several of the most important alimentary principles which render them incomparably more susceptible to the action of the digestive ferments than in the uncooked state. The discovery of the use of fire-heat in the preparation of his food must indeed have constituted one of the earliest and most important steps in the process by which man has emerged from the ranks of the dumb creation. The stores of proteid and farinaceous nutriment contained in the seeds of cereals and leguminous plants, and in the bulbs, tubers, roots, and succulent stems of certain vegetables are, in the raw state, nearly altogether beyond his powers of digestion. By the discovery of the art of cooking, these immeasurable stores were at one stroke laid open to him. It is, moreover, chiefly by the same art that he has been enabled to take his food at intervals, in separate meals; and has thereby been for ever relieved of the necessity which is imposed on all animals in the wild state of having to spend almost the entire of their waking hours either in seeking after their food like the carnivora, or in consuming their food like the vegetable feeders. This immunity secured to him the untold advantage of possessing the leisure requisite for the cultivation of his higher faculties.

The practice of cooking is not equally necessary in regard to all articles of food. There are important differences in this respect, and it is interesting to note how correctly the experience of mankind has guided them in this matter. The articles of food which we still use in the uncooked state are comparatively few; and it is not difficult in each case to indicate the reason of the exemption. Fruits, which we consume largely in the raw state, owe their dietetic value chiefly to the sugar which they contain; but sugar is not altered by cooking. Salads may be regarded more as a relish for other food and as having a *quasi* medicinal purpose, rather than as a substantial source of nutriment. Milk is consumed by us both cooked and uncooked indifferently, and experiment justifies this indifference, for I found on trial that the digestion of milk by pancreatic extract was not appreciably hastened by previously boiling the milk.

Our practice in regard to the oyster is quite exceptional, and furnishes a striking example of the general correctness of the popular judgment on dietetic questions. The oyster is almost the only animal substance which we eat habitually, and by preference, in the raw or uncooked state; and it is interesting to know that there is a sound physiological reason at the bottom of this preference. The fawn-coloured mass which constitutes the dainty of the oyster is its liver, and this is little else than a heap of glycogen. Associated with the glycogen, but withheld from actual contact with it during life, is its appropriate digestive ferment—the hepatic diastase. The mere crushing of the dainty between the teeth brings these two bodies together, and the glycogen is at once digested without other help by its own diastase. The oyster in the uncooked state, or merely warmed, is, in fact, self-digestive. But the advantage of this provision is wholly lost by cooking, for the heat employed immediately destroys the associated ferment, and a cooked oyster has to be digested, like any other food, by the eater's own digestive powers.

With regard, however, to the staple articles of our food, the practice of cooking it beforehand is universal. In the case of farinaceous articles cooking is actually indispensable. When men under the stress of circumstances have been compelled to subsist on the uncooked grain of the cereals, they have soon fallen into a state of inanition and disease. By the process of cooking, starch is not merely liberated from its protecting envelopes, but it suffers a chemical change, by which it is transformed into the gelatinous condition, and this enormously facilitates the attack of the diastatic ferments. A change of equal importance seems to be induced in the proteid matter of the grain. I found that the gluten of wheat was incomparably more digestible, by both artificial gastric juice and by pancreatic extract, in the cooked than in the uncooked state. In regard to flesh meat the advantage of cooking consists chiefly in its effects on the connective tissue, and the tendinous and aponeurotic structures associated with muscular fibre. These are not merely softened and disintegrated by cooking, but are chemically converted into the soluble and easily digested form of gelatine. I made some instructive observations on the effects of cooking on the contents of the egg. The change induced by cooking on egg-albumen is very striking. For the purpose of testing this point I employed the solution of egg-albumen before spoken of, made by mixing white of egg with nine times its volume of water. This solution, when boiled in the water-bath, does not coagulate nor sensibly change its appearance, but its behaviour with the digestive ferments is completely altered. In the raw state this solution is attacked very slowly by pepsin and acid, and pancreatic extract has almost no effect on it; but after being cooked in the water-bath, the albumen is rapidly and entirely digested by artificial gastric juice, and a moiety of it is rapidly digested by pancreatic extract.

My object in making these remarks is to show that the changes impressed on food by cooking form an integral part of the work of digestion—a part which we of the human race get done for us by the agency of fire-heat,—but a part which the lower animals are compelled to perform by the labour of their own digestive organs. It must also be borne in mind that the digestive process carried on in the alimentary canal is, strictly speaking, executed on a doubling of the exterior surface, and not in the true interior of the body. If we take all these considerations into account, it will appear, I think, not unnatural that we should try to help our invalids by administering their food in an already digested, or partially digested, condition. We should thereby only be adding one more to the numberless artificial contrivances with which our civilised life is surrounded.

Dr. Pavy(a) was, I believe, the first to carry into actual practice the idea of preparing an artificially digested food. At his suggestion Messrs. Darby and Gosden introduced a preparation which consisted of meat reduced to a fluid state by artificial digestion. The formula for this preparation has not, so far as I know, been made public. It is still in the market, and is sent out and advertised by Savory and Moore under the title of "Darby's Peptonised Fluid Meat." A specimen of this preparation is on the table before me. It has the appearance of a light brown very thick treacle. It has a strong salt taste and an agreeable meaty flavour, without any bitterness. It is mostly soluble in water. The solution does not precipitate on boiling, nor with nitric acid, and it gives a strong reaction of peptone, with Fehling's solution, and with tannin.

I have also before me a specimen of artificially digested meat prepared by Mr. Benger. It is a greyish-looking extract, with a pleasant meaty flavour, and is quite devoid

(a) "A Treatise on Food and Dietetics," second edition, page 559.

of bitterness. It dissolves mostly in water, and the solution gives the usual reactions of peptone in great intensity. Mr. Benger informs me that it is made by operating, at a temperature of about 140° Fahr., on finely triturated raw beef with pancreatic extract and a little carbonate of soda. The solution thus obtained is neutralised with hydrochloric acid, and then evaporated at 212° Fahr. to the consistency of a solid extract. Both of these preparations appear to me to be much superior in value to any of the meat extracts hitherto introduced.

But however useful preparations of this class may prove to be, in a limited range of circumstances, it is pretty evident that if artificially digested food is to be employed on the large scale, and among all classes, means must be found to bring the preparation of it within the range of culinary operations and the apparatus of the kitchen and sick-room.

The difficulty hitherto encountered in the production of an artificially digested or peptonised(b) food, suitable for invalids, is mainly owing to the use of the gastric method in its preparation. If you subject any native article of food—say milk, bread, egg, or meat—to artificial digestion with pepsin and hydrochloric acid, you destroy more or less completely the grateful odour and taste, and the inviting appearance, which made it desirable as food, and convert it into an unsavoury mess, from which the human palate turns away with disgust. The unsavouriness of artificially digested food is, however, not due to any ill taste or smell inherent in the products of digestion—which, when purified, are both odourless and free from any unpleasant flavour—but to a number of bye-products of various kinds, which accumulate as digestiou proceeds. One of these bye-products is a substance with a pure bitter flavour, which seems to be a constant accompaniment of gastric digestion. It is also developed in some cases in the later stages of pancreatic digestion. I have not observed this bitter substance, except in the digestion of proteids. It is evidently a normal educt of the process, and its presence probably accounts, in most cases, for the bitter flavour of the eructations, of which dyspeptics complain, and which is generally attributed to the regurgitation of bile. It would be interesting to know more about this substance.

My own efforts to produce a palatable peptonised food have been chiefly directed to the pancreatic method. The pancreas excels the stomach as a digestive organ, in that it has power to digest the two great alimentary principles, starch and proteids; and an extract of the gland is possessed of similar endowments. This double power is a manifest advantage in dealing with vegetable alimeuts, which contain both starch and proteids.

Any extract of pancreas may be used for the preparation of artificially digested food, but the most suitable are those prepared with dilute spirit or chloroform-water. The extract sent out by Mr. Benger under the name of "Liquor Pancreaticus," is an almost faultless pharmaceutical preparation. It is made by extracting perfectly fresh and finely chopped pancreas with four times its weight of dilute spirit. By some ingenious devices, Mr. Benger has succeeded in overcoming the mechanical difficulties of the manufacture, and has produced an extract which possesses the diastatic and proteolytic properties of the pancreas in a highly concentrated degree. It is a nearly colourless solution, with very little taste or smell beyond that of the spirit used to preserve it. It is of this preparation that I must be understood to speak in what I have now to say on the production of artificially digested food by pancreatic extracts.

My attention was first turned to the artificial digestion of milk, and I soon found that it was possible, by means of pancreatic extract, to digest this important article of food with comparatively little disturbance of its taste and appearance. Milk contains all the elements of a perfect food, adjusted in their due proportion for the nutrition of the body. Two out of its three orgauic constituents—namely, the sugar and the fat—exist already in the most favourable condition for absorption, and require little, if any, further assistance from the digestive ferments. It is therefore obvious that if we could change the casein of milk into peptone without materially altering the flavour and appearance of the milk, such a result would go far towards solving the problem of supplying an artificially digested food for the use of the sick.

(b) I may be permitted to use the word "peptonised" as a convenient abbreviation for the phrase "artificially digested."

Pancreatic Digestion of Milk.

When milk is subjected to the action of pancreatic extract, at a temperature of 100° Fahr. (38° C.), in an open glass vessel, a series of changes take place in it, which are highly interesting to watch. The first thing that arrests the observer's notice is that the tough wrinkled skin which quickly forms on the surface of warm milk when exposed to the air is either not produced at all, or is only produced in a very imperfect degree. In its stead there forms a slight brittle and perfectly smooth pellicle of quite a different appearance. The next thing noticed is that the milk becomes more or less softly curdled. By-and-by the curds begin to re-dissolve, and the milk gradually re-assumes its originally diffluent condition. A portion of the curd is, however, very resistant, and remains undissolved for many hours. If the milk be diluted beforehand with one-third or one-fourth of its bulk of water, this curdling phase is altogether omitted, or is only observed as a slight and transient thickening. Next follows a very curious change of aspect. The milk loses its glossy white appearance, and gradually assumes a dull yellowish-grey shade which is characteristic, and the degree of which enables the practised eye to judge with considerable precision how far the peptonising process has advanced. This change of aspect is, however, by no means conspicuous, and would scarcely be remarked in a cursory observation, except by comparison with unaltered milk. While these changes are proceeding, the milk gradually loses its proper flavour, and at length developes a pure bitter taste, which is to many palates not disagreeable. No really unpleasant flavour is produced, unless the process is allowed to go on to incipient decomposition.

The progressive transformation of the casein into peptone, of which these outward signs are the indications and accompaniments, may be followed by testing the milk from time to time with acetic acid. At first the addition of the acid causes an abundant precipitation of curdy matter, but this reaction progressively diminishes in intensity until at length it ceases altogether. When this point is reached the transformation may be regarded as complete. All the casein has been changed into peptone—even nitric acid no longer causes a precipitate. The time occupied in the transformation (supposing the temperature and the activity of the preparation to be constant) depends on the quantity of pancreatic extract added, and may be made to vary from a few minutes to several hours. In the ordinary operation of preparing peptonised milk for invalids, two or three teaspoonfuls of the liquor pancreaticus are added to one pint of milk, diluted with a fourth of its bulk of water. With these proportions the process is usually completed in from two and a half to three hours.

Modified Casein or Metacasein.—The conversion of casein into peptone does not take place by a direct transformation of the one body into the other. You all know that milk does not curdle or coagulate in the least degree on being boiled, but when milk is subjected to the action of pancreatic extract (provided no alkali is added), it speedily loses this negative property and curdles abundantly on boiling. This coagulation on boiling is most intense a few minutes after the addition of the extract, and it very gradually diminishes in intensity as the action goes on, and ceases altogether at the same time that acetic acid ceases to cause a precipitate. It was, moreover, found that if the milk was boiled at the period of the greatest intensity of this reaction, and thrown on a filter, the whole of the albuminoid matter of the milk was caught on the filter in the form of curds, and the filtrate showed not the slightest reaction of casein. These reactions revealed the interesting fact that in the transformation of casein into peptone by pancreatic extract, the first step in the process is the conversion of casein into an intermediate body, and that it is this intermediate body which is subsequently gradually changed into peptone. This body may provisionally be called *metacasein*, signifying thereby that it is still casein, but in a modified condition. Metacasein is characterised by two reactions, which, taken together, serve to distinguish it from other proteid bodies—it is coagulated by boiling in neutral media, and it is precipitated in the cold by acetic acid. The conversion of casein into metacasein in pancreatic digestion takes place almost suddenly, as is shown by the following experiment:—Five cubic centimeters of pancreatic extract were added to 100 cubic centimeters of milk, diluted with one-fourth of its bulk of water, and

maintained at blood-heat. The first slight, almost doubtful, evidence of coagulation on boiling was perceived in three minutes; in five minutes coagulation on boiling was pronounced; and in nine minutes it had reached its maximum. From this point coagulation on boiling, and precipitation on the addition of acetic acid, diminished in intensity *pari passu* very gradually for a period of two hours, when both reactions finally ceased.

Taking these observations and reactions together, it is evident that the conversion of casein into metacasein constitutes a first and distinct step in the transformation of casein by trypsin, and that this step is antecedent to the further and slower changes by which metacasein is transmuted into peptone. It is impossible not to see in this a striking analogy with the sudden transformation of gelatinous starch into soluble starch under the action of diastase, as described in a previous lecture.

When milk is rendered slightly alkaline by the previous addition of a little bicarbonate of soda, no precipitation on boiling occurs during its digestion by pancreatic extract. But the metacaseiu is nevertheless produced, and its presence may be detected by carefully saturating the alkali, and then boiling. For although metacasein is precipitated on boiling when the solution is neutral, it is not precipitated when the solution is even slightly alkaline. This is the reason why, in preparing peptonised milk for the sick, it is desirable to add to it a small quantity of bicarbonate of soda.

The foregoing account of the behaviour of milk with pancreatic extract will greatly facilitate the comprehension of the practical rules which must be followed in preparing peptonised dishes for invalids. I confine myself for the present to articles of which the basis is milk, or farinaceous gruel, or both together.

Peptonised Milk.—A pint of milk is diluted with a quarter of a pint of water, and heated to a temperature of about 140° Fahr. (60° C.). Two or three teaspoonfuls of liquor pancreaticus, together with ten or twenty grains of bicarbonate of soda, are then mixed therewith. The mixture is then poured into a covered jug, and the jug is placed in a warm situation under a "cosey," in order to keep up the heat. At the end of an hour or hour and half the product is boiled for two or three minutes. It can then be used like ordinary milk.

The object of diluting the milk is to prevent the curdling which would otherwise occur and greatly delay the peptonising process. The addition of bicarbonate of soda prevents coagulation during the final boiling, and also hastens the process. The purpose of the final boiling is to put a stop to the ferment action when this has reached the desired degree, and thereby to prevent certain ulterior changes which would render the product less palatable. The degree to which the peptonising change has advanced is best judged of by the development of the bitter flavour. The point aimed at is to carry the change so far that the bitter taste is distinctly perceived, but is not unpleasantly pronounced. As it is impossible to obtain pancreatic extract of absolutely constant strength, the directions as to the quantity to be added must be understood with a certain latitude. The extent of the peptonising action can be regulated either by increasing or diminishing the dose of the liquor pancreaticus, or by increasing or diminishing the time during which it is allowed to operate. By skimming the milk beforehand, and restoring the cream after the final boiling, the product is rendered more palatable and more milk-like in appearance.

Peptonised Gruel.—Gruel may be prepared from any of the numerous farinaceous articles which are in common use—wheaten flour, oatmeal, arrowroot, sago, pearl barley, pea or lentil flour. The gruel should be very well boiled, and made thick and strong. It is then poured into a covered jug, and allowed to cool to a temperature of about 140° Fahr. Liquor pancreaticus is then added in the proportion of a tablespoonful to the pint of gruel, and the jug is kept warm under a "cosey," as before. At the end of a couple of hours the product is boiled, and finally strained. The action of pancreatic extract on gruel is twofold—the starch of the meal is converted into sugar, and the albuminoid matters are peptonised. The conversion of the starch causes the gruel, however thick it may have been at starting, to become quite thin and watery. The bitter flavour does not appear to be developed in the pancreatic digestion of vegetable proteids, and peptonised gruels are quite devoid of any unpleasant taste. It is difficult to say to what extent the proteids are peptonised in the process of digestion by pancreatic extract. The product, when filtered, gives an abundant reaction of peptone; but there is a considerable amount left of undissolved material. Most of this, no doubt, consists of insoluble vegetable tissue, but it also contains some unliberated amylaceous and albuminous matter. Peptonised gruel is not generally, by itself, an acceptable food for invalids, but in conjunction with peptonised milk (peptonised milk-gruel), or as a basis for peptonised soups, jellies, and blanc-manges, it is likely to prove valuable.

Peptonised Milk-Gruel.—This is the preparation of which I have had the most experience in the treatment of the sick, and with which I have obtained the most satisfactory results. It may be regarded as an artificially digested bread-and-milk, and as forming by itself a complete and highly nutritious food for weak digestions. It is very readily made, and does not require the thermometer. First a good thick gruel is prepared from any of the farinaceous articles above mentioned. The gruel, while still boiling hot, is added to an equal quantity of cold milk. The mixture will have a temperature of about 125° Fahr. (52° C.). To each pint (550 cubic centimeters) of this mixture, two or three teaspoonfuls of liquor pancreaticus and twenty grains of bicarbonate of soda are added. It is then kept warm in a covered jug under a "cosey" for a couple of hours, and then boiled for a few minutes, and strained. The bitterness of the digested milk is almost completely covered in the peptonised milk-gruel; and invalids take this compound, if not with relish, without the least objection.

Peptonised Soups, Jellies, and Blanc-manges.—I have sought to give variety to peptonised dishes by preparing soups, jellies, and blanc-manges containing peptonised aliments. In this endeavour I have been assisted by a member of my family, who has succeeded beyond my expectations. She has been able to place on my table soups, jellies, and blanc-manges containing a large amount of digested starch and digested proteids, possessing excellent flavour, and which the most delicate palate could not accuse of having been tampered with. Soups were prepared in two ways. The first way was to add what cooks call "stock" to an equal quantity of peptonised gruel, or peptonised milk-gruel. A second and better way was to use peptonised gruel, which is quite thin and watery, instead of simple water, for the purpose of extracting shins of beef and other materials employed for the preparation of soup. Jellies were prepared simply by adding the due quantity of gelatine or isinglass to hot peptonised gruel, and flavouring the mixture according to taste. Blanc-manges were made by treating peptonised milk in the same way, and then adding cream. In preparing all these dishes it is absolutely necessary to complete the operation of peptonising the gruel or the milk even to the final boiling before adding the stiffening ingredient. For if pancreatic extract be allowed to act on the gelatin, the gelatin itself undergoes a process of digestion, and its power of setting on cooling is utterly abolished.

Peptonised Beef-Tea.—Half a pound of finely minced beef is mixed with a pint of water and twenty grains of bicarbonate of soda. This is simmered for an hour and half. When it has cooled down to about 140° Fahr. (60° C.), a tablespoonful of the liquor pancreaticus is added. The mixture is then kept warm under a "cosey" for two hours, and occasionally shaken. At the end of this time the liquid portions are decanted and boiled for five minutes. Beef-tea prepared in this way is rich in peptone. It contains about 4·5 per cent. of organic residue, of which more than three-fourths consist of peptone, so that its nutritive value in regard to nitrogenised materials is about equivalent to that of milk. When seasoned with salt it is scarcely distinguishable in taste from ordinary beef-tea.

The extreme solubility of digested products—whether of starch or of proteids—detracts from their acceptability to the healthy. To them they appear thin and watery—they miss the sense of substance and solidity which is characteristic of their ordinary food. But to weak invalids without appetite this sense of substance or thickening is generally an objection, and they take with more ease an aliment which they can drink like water. The jellies and blanc-manges, on the other hand, give to invalids of more power that sense of resistance and solidity which is desired by those of stronger appetite.

ORIGINAL COMMUNICATIONS.

THE VARIOUS METHODS OF DEALING WITH THE PEDICLE IN OVARIOTOMY.

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The pedicle of an ovarian tumour is made up of the blood-vessels, lymphatics, nerves, and ligament of the ovary, united by more or less areolar, fibrous, elastic, and unstriped muscular tissue, and covered all round with a layer of peritoneum.

Along with this true pedicle we may also have the round ligament of the uterus, and still more commonly the Fallopian tube. This latter does not necessarily always form part of the pedicle; but I believe it is always wise to include it—first, because there is no object in leaving a structure whose function is gone with the removal of its ovary; second, because I have observed several times that when the ovary is ligatured off from the tube, the latter at once becomes intensely congested. I have even seen it bleed from rupture of its distended vessels. It is quite clear that, left in this condition, it must be a source of danger; and as removing it in no way increases the danger, and is, as I have said, indicated, as its function is gone, I think it best always to include it in the pedicle.

In considering how we may most advantageously deal with this complex structure, the pedicle, when removing an ovarian tumour by ovariotomy, we shall find that each of the component parts requires some share of our attention. The bloodvessels are of course the most important, and the first and great object of any method is security against hæmorrhage. But while attending to this, we cannot ignore the convenience of the other tissues in and around the pedicle. We have to remember that the lymphatics are closely connected with the whole peritoneal surfaces, and with those of the lower extremities, and that mischief set up in those of the pedicle may thus rapidly spread over a large area; that the nerves must not be unduly irritated; that the muscular tissue by its contraction may cause the stump to work out of the grasp of any constricting agent which we employ, and that the extreme elasticity of the pedicle tends to the same misfortune.

The method which most effectually prevents hæmorrhage, and is least obnoxious to the tissues, is the one we seek.

Keeping these essentials in view, we have also to consider what method will most effectually and speedily obliterate the pedicle without leaving to the patient any after-inconvenience. And we must not, as surgeons, forget that we practise an art as well as a science, and must therefore, after satisfying the scientific requirements of the case, consider also how to apply our method rapidly, cleanly, and neatly.

Now, bearing in mind both the scientific and the artistic requirements, we will briefly discuss the various methods of dealing with the ovarian pedicle which have been advocated or adopted by different surgeons.

I shall adopt the plan of Peaslee, and take the various methods in chronological order, and may take this opportunity of acknowledging my debt to that author for his exhaustive historical *resumé* of the subject.(b)

The first method we have to consider is that adopted by McDowell in 1809. He tied a ligature round the pedicle, and brought the ends, or one end (it is immaterial which), out at the lower angle of the wound.

The objections to this plan are—

1. A single ligature, however thick and strong, should not be trusted to secure a large broad or thick pedicle, because, from the nature of the tissues which compose it, considerable shrinking may take place after the ligature is tightened, and vessels which did not bleed at the time may bleed, as a result of this shrinking, sufficiently to cause death. Then, of course, from this same shrinking the ligature is liable to slip off. There are numerous cases on record in which fatal hæmorrhage has occurred from both accidents.

2. The leaving the ligatures long necessitates their ulceration through the pedicle-stump. It may happen, and probably generally did happen, in the successful cases ligatured on this plan, that the distal portion of the stump had secured for itself a new base of blood-supply by adhesion to some neighbouring peritoneal surface long before the ligatures separated. Without such fortunate adhesion the distal portion was sure to die, and the long ligatures passing down to it were equally certain to carry putrefaction. Then there was, deep down in the peritoneum, a putrid mass of dead tissue. What wonder that the mortality was large enough to bring the operation into discredit? Should we not rather wonder that any patient recovered? Besides the above risks, there was also that of secondary hæmorrhage when the ligature separated. As I shall have again to refer to the long ligature used in various ways, it may be well to point out, once for all, that its use was due to an imperfect knowledge of what really does take place in a piece of tissue more or less completely cut off from vascular supply by ligature, but remaining in the body and surrounded by healthy living tissues. Those who still use the long ligature, either for an ovarian pedicle or in any surgical procedure, display an ignorance of the present state of our knowledge on this subject, or an obstinate adherence to an old and vicious practice, which is to me incomprehensible.

Ten years after McDowell, Chrysmar adopted the improved plan of using two ligatures and securing the pedicle in two halves. This necessitated transfixion of the pedicle, and provided against both the accidents named as objections to the single ligature—against shrinking by enclosing smaller portions of tissue in each loop, and against slipping off of the ligature.

Dutoit gives Chrysmar the additional and very great credit of cutting his ligatures short; but Peaslee, after referring to the original records of Chrysmar's method, rejects this statement.

In 1821, Nathan Smith, in America, adopted an exceedingly good plan, and one which came very near to perfection. He ligatured the vessels separately, and cut the ligatures short; and he used an animal tissue for these ligatures, viz., leather.

I shall have, hereafter, to point out objections to the separate ligature of the vessels, and of course leather is not a very suitable material for ligatures, because, when wet, it is both slippery and unduly yielding.

In 1825, Lizars, in Edinburgh, used the long ligatures; in some cases tying vessels separately, and in others transfixing. Rogers of New York, in 1829, followed Nathan Smith's plan, and Bellinger of South Carolina, also, in 1835, the latter using animal ligatures.

Others tied the vessels separately, and then a long ligature round the whole pedicle.

In England, Jeaffreson of Framlingham, and Crisp, in 1836 and 1838, cut the ligatures short.

Stilling of Cassel, having lost a case from hæmorrhage which he had treated by the single long ligature, advocated leaving a portion of the cyst upon the pedicle, and making it protrude through the incision, or, if the pedicle was too short for this, then suturing the portion thus left on a level with the wound.

Our present knowledge of the histological structure of most ovarian tumours will at once lead us to condemn this practice as tending to a recurrence of the disease in the stump and cicatrix. I adopted it for part of one pedicle in my seventh case, and the patient has since died from recurrence in the cancer wards at Middlesex Hospital. Langenbeck at one time also adopted this method. Charles Clay of Manchester, Walne, Frederick Bird, and J. L. Atlee, all used the long ligature, though differing somewhat in their methods of applying it.

Siebold of Darmstadt followed the good practice of Nathan Smith.

Handyside of Edinburgh, and March, Greene, and Peaslee of the United States, carried the ends of the long ligatures out through the pouch of Douglas into the vagina; thus adding seriously to the dangers of the long ligature by carrying the long ends at once into the vagina, in which we know putrefaction is particularly prone to occur. Brought out at the abdominal incision, and with careful dressing of the wound, some days might pass without the ligatures becoming soaked with putrid fluid, and the tissues of the stump were then in a better condition to resist putrefaction when it

(a) A paper read before the Harveian Society, March 18, 1880.
(b) "Ovarian Tumours: their Pathology, Diagnosis, and Treatment, especially by Ovariotomy." By E. Randolph Peaslee, M.D., etc.

did occur. Brought out through the vagina, the whole ligatures were probably thoroughly soaked with putrefying fluid in a very few hours.

In 1847, Langenbeck proposed to tie the pedicle without including its peritoneal covering. He still used the long ligatures, and hence lost any advantage his method might have had.

The same objection seems to me to exist, with regard to this subperitoneal method, which exists to tying the vessels separately, viz., the want of all security against serous oozing from the lax cellular tissue and from the small vessels in the peritoneum. The amount of mixed serum and blood poured out in this way into the peritoneum soon after the operation would be in some cases considerable.

In 1848, Maisonneuve of Paris treated the whole pedicle by torsion. There is no objection to advance against this method, except the impossibility of applying it in the majority of cases, and the imperfect security it affords against hæmorrhage. Heyfelder in some cases twisted the separate vessels. The same objection applies to this plan which I have urged against ligature of the separate vessels. Duffin of London, Langenbeck, and Storer of Boston, followed Stilling's method, but covered the stump with the skin after stitching it into the incision. I have already pointed out certain objections to Stilling's plan, and it is obvious that the closing in of the stump in this situation is still more objectionable.

In 1858, J. L. Atlee first used the écraseur, and he was followed by his brother W. L. Atlee, who used it many times, by Pope of St. Louis, and by Mr. Wells, who used it in one case successfully.

Theoretically, torsion and the écraseur are the most perfect methods possible, but they labour under the disadvantage of being but imperfect safeguards against hæmorrhage.

In 1858, Hutchinson suggested and employed the clamp. With various modifications, this instrument has found great favour with ovariotomists. I suppose the readiness with which it can be applied to most pedicles, and the feeling of security it gives against hæmorrhage, have led to this popularity, for a more unscientific instrument it is impossible to imagine.

In spite of the success which attended its use in the hands of Mr. Wells, I early conceived a great dislike for it, for reasons which I shall give immediately, and I only used it seven times after I began to operate myself. The first and great objection to it is, that it fixes the pedicle in the wound, and causes, after cicatrisation is complete, a drag upon the cicatrix, and thus predisposes to ventral hernia, which is one of the greatest misfortunes following ovariotomy. Patients suffering from this are made very miserable: they have a constant sense of weakness, dragging pains at the site of rupture, and frequently almost constant backache and lassitude.

Another evil resulting from the use of the clamp is patency of the Fallopian tube and discharge of blood at the monthly periods. This is usually only temporary, lasting for a few months after operation, but in some cases it is much more persistent; and I know of more than one case in which this condition continues years after the operation. A few days before each period, the cicatrix, at the site of the pedicle, becomes so tender that the belt can hardly be borne, then a little discoloured bleb forms and breaks, discharge continuing during the remainder of the period.

Septic peritonitis commencing in the peritoneal covering of the pedicle, and thence spreading inwards, adhesion of intestine to the pedicle with fatal obstruction, septic poisoning when the clamp separates and the stump retracts into the wound, hernia of the pedicle and dragging pain, with troublesome vomiting, are among other rarer complications attending its use. I have seen examples of all these conditions, and many such cases have been recorded.

A still rarer accident, but one which has occurred more than once, is hæmorrhage from the clamp cutting the pedicle. To these graver evils must be added prolongation of the time during which the patient has an open sore, and the necessity for a daily dressing, with frequently an amount of offensive discharge, which is detrimental to the general salubrity of the hospital atmosphere. Serious hæmorrhage has occurred on the separation of the clamp; and cases are on record in which it has slipped into the peritoneum during coughing or vomiting, or from extreme tympanitic distension.

I do not think such a list of objections can be supported from experience against any of the other methods if we except the long ligature. I have not thought it necessary to refer in detail to the misfortunes following the use of the latter, as I think it may fairly be considered as quite obsolete.

I do not propose to allude to the many forms of clamp which have been suggested and used, but I think the pattern which Mr. Wells has used most is decidedly the most efficient and most easy of application.

Having expressed this strong opinion of the demerits of the clamp, I am bound to confess that in certain cases of removal of uterine tumours it still answers better than any method yet introduced, though I am confident that, with time and experience, we shall find something to supersede it. Koeberle's *serre-nœud* has found favour with some, though I cannot see any great difference between his method of using it, and the simple ligature with the pedicle fixed in the wound.

In 1869, Sir James Simpson proposed and successfully used his favourite plan of acupressure for the treatment of the ovarian pedicle, but it has not found favour with ovariotomists, and need not detain us.

Dr. Gustavus Murray, in 1865, employed a figure-of-eight ligature, and I have myself seen him apply this ingenious method with success.

In 1864, Mr. Baker Brown introduced the actual cautery; and theoretically this is certainly one of the best methods. It is not, however, by any means of universal applicability, and in many cases its use has to be supplemented by the ligature—a fatal objection to it, in my opinion, because the ligatures have then to be applied on half-dead tissue, and the portions they include are much more likely to slough. Thus, in his first five hundred cases, Mr. Wells used the cautery thirty times, but in fourteen cases it had to be supplemented by the ligature, and, as we might expect, the mortality in the fourteen cases was double that in the sixteen cases in which the cautery alone sufficed.

The great advantage of the cautery is that it leaves no foreign substance in the peritoneum, but it leaves a lump of half-cooked tissue, and, except as affording more security against hæmorrhage, cannot claim any advantage over Maisonneuve's plan of torsion.

We cannot, however, forget the magnificent results obtained with the cautery by Dr. Keith. I am not sure whether he has ever published any accurate statement of the number of cases in which he had to supplement the cautery by the ligature; but whether his cases were treated by cautery alone, or by cautery and ligature, the results are such as must commend the method. I have rarely tried it myself, and when I have, have been obliged to supplement its use by one or more ligatures.

In 1868, Masslovsky of St. Petersburg cut peritoneal flaps, and so covered in the cut end of the pedicle, believing that this would prevent its adhesion to neighbouring organs. The objection to this is that the flaps are likely to confine the serous discharge, and thus lead to tension and suppuration in the enclosed end of the stump.

In 1869, Dr. Macleod of Glasgow invented some very ingenious forceps for complete torsion of the pedicle; but the cases in which they are applicable are very rare.

In the same year, Dr. Nunn of Buffalo performed complete enucleation of a cyst without applying any ligatures. This method is very valuable in certain broad ligament cysts, and I have many times employed it for partial removal of a tumour, but it is rarely we can complete the operation without some ligatures. Partial enucloation enables us to remove some tumours which could not be removed at all without it, but it adds much to the risk of the operation.

In 1869, Dr. Peaslee invented a very ingenious drainage-tube and knife, by means of which the ligatures could be cut and removed at any period after the operation, when they were supposed to have performed their function, but I think its ingenuity is its chief claim to our notice.

Other slightly different methods have been suggested or adopted by various operators, but they are merely slight modifications of some of the above, and do not call for special remark.

In 1861, Dr. Tyler Smith, in performing his eighth ovariotomy, reintroduced the method of Nathan Smith, transfixing the pedicle, cutting the ligatures short, and dropping the stump back into the peritoneum. To him undoubtedly belongs the credit of popularising this method with the profession, though he cannot deprive our American brethren of the honour of first introducing it.

Having seen Mr. Wells employ this method in a large number of cases, in which it was impossible to employ the clamp, I became convinced that it was *the method* of the future, and only needed to be applied constantly in a long series of cases to establish its superiority over other methods.

First. It is universally applicable.

Second. It is, when used with sufficient care, a perfect safeguard against hæmorrhage.

Third. It is scientific in principle.

Fourth. It is neat, cleanly, and speedy in application.

Fifth. It allows the incision to be completely closed at once, and thus hastens convalescence.

Sixth. It completely obliterates the pedicle stump as quickly as any intra-peritoneal method does, and more quickly than any extra-peritoneal method.

In thus claiming for the complete intra-peritoneal ligature of the ovarian pedicle in ovariotomy the foremost place among the many methods I have named, I must point out that there are many different ways of applying it, and I shall endeavour to prove by my own practice that the method I advocated in my paper in the *British Medical Journal*,(c) in January, 1878, is the most in accordance with the needs I have pointed out in my introductory remarks, and will give us the best results.

(*To be continued.*)

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

HOSPITAL FOR CONSUMPTION, ETC., BROMPTON.

CASE OF PARACENTESIS THORACIS,

IN WHICH A MODIFICATION OF THE USUAL METHOD WAS ADOPTED IN ACCORDANCE WITH THE SUGGESTION OF MR. PARKER.

(Under the care of Dr. SYMES THOMPSON.)

A SINGLE woman, aged twenty-three, inheriting phthisis from her mother, had a severe attack of pleurisy three years ago, and six months ago an attack described as "inflammation of the lungs." Since the original attack of pleurisy, dry cough, with slight occasional streaky expectoration, shortness of breath, and loss of flesh have occurred.

On admission in February the chest was found to be expanded and motionless on the left side, measuring an inch more in its left than right semi-diameter. The heart's impulse was distinct in the third and fourth intercostal spaces on the right of the sternum. On percussion, dulness was absolute as high as the spine of the scapula. The breathing was very feeble and distant, but heart-sounds distinct over the dull region; and at the left apex crepitant sounds of a crackling character were audible, and the same sounds were heard, though less distinctly (apparently conducted), at the right apex.

It was not easy to determine from the history how long the effusion had existed; as it appeared to increase, it was determined to remove the fluid. This was accordingly done on February 24, when sixty-six ounces of greenish sero-purulent fluid were removed. The heart's impulse was no longer apparent on the right of the sternum; the dyspnœa was markedly lessened, and the patient greatly relieved, and in two or three days she was walking about the corridors.

Diuretics were given, and the patient's general health was well maintained.

Gradually, however, the fluid re-collected, and on April 16 the state of affairs was much the same as at the time of the first operation, six weeks before. Pulsation again returned in the right side, and some difficulty of breathing felt, especially on going upstairs. The left semi-circumference of the chest, which had been reduced to half an inch less than the right, again rose to three-quarters or one inch in excess, and it was determined to evacuate the fluid again; and, with a view of removing, as far as possible, the whole contents of the cavity, it was decided, in consultation with Dr. Powell, to employ the method suggested by Mr. R. W. Parker, Surgeon to the East London Hospital for Children—viz., to introduce a second trocar through which air, filtered, warmed, and carbolised, might be admitted to take the place of the fluid evacuated, and thus allow of the complete emptying of the sac.

Accordingly, on April 16, an incision was made, and a medium-sized trocar introduced in the ninth interspace two inches below the former incision. Before much of the fluid had been allowed to escape, a fine trocar or aspirator needle was introduced into the fifth interspace, connected with the apparatus to be described, and sixty-eight ounces of alkaline, albuminous, sero-purulent fluid were drawn off. When about sixty ounces had escaped, the flow ceased, but recommenced on using the Higginson's pump and thus introducing air into the cavity. It was remarkable that during the operation none of that cough or sense of painful dragging in the chest was experienced, as is usual when an attempt is made to withdraw all the fluid that can be evacuated with the aspirator or syphon drainage-tube. The larger and lower wound healed by first intention, but the upper wound was painful, and a distinct friction-sound was audible here, limited, however, to inspiration, the lung being brought into contact with the chest-wall only on deep inspiration. A slight elevation of temperature occurred for two days, but no constituted fever.

Ten days after the operation a splashing sound was noticed by the patient, and a day or two after, succussion sounds were audible, and the metallic echo or bell-sound on striking one coin against another in contact with the chest.

A month after the operation the left semi-diameter of the chest was nearly an inch less than the right. The tympanitic resonance was less marked, respiratory sounds were audible over a considerable extent of the left side, but at the extreme base dulness was noted on percussion to the extent of an inch and a half, and a slow re-accumulation of the fluid threatened. The patient, however, returned home into Sussex early in May.

For the following description of the apparatus used we are indebted to Mr. Parker:—

"To a small Wolff's bottle with two necks I attached a Higginson's elastic bag, the proximal end of which communicates with carbolised cotton-wool contained in a suitable glass vessel; the other neck of the bottle communicates with an elastic tube, to the end of which is attached a fine aspirator needle; the bottle is partially filled with a hot solution of carbolic acid (one in twenty). By this means any air which passes through the bottle is filtered, carbolised, and warmed. The mode of use is obvious. After withdrawing a small quantity of fluid from the empyema cavity through an ordinary aspirator, the needle of which should be placed in the lowest part of the cavity, the fine needle of the filter apparatus is introduced into the upper part of the cavity, and a small quantity of air is forced in; this is repeated as often as may be desirable. The advantages I would claim are—(1), the possibility of emptying completely any empyema cavity that one meets with, however rigid its walls may be; (2), absence, *during the operation*, of the distressing cough generally met with, and *after the operation*, of the sensation of dragging, not infrequently complained of when any considerable quantity of fluid has been withdrawn; (3), the probability that there will be less re-accumulation of fluid—for the vessels, under the old methods of tapping, were left unsupported and in a comparative vacuum, while under this plan they will be relieved from both these disadvantages. Experience alone can teach how much air should be introduced. Theoretically, of course, the air in the pleural cavity should be a little less dense than the external air, or otherwise the lung will not be able to expand. Therefore, one would say that, at the conclusion of the operation, after withdrawing the pus-needle and closing the skin-wound, a little of the air might advantageously be withdrawn. This would place the lung, from the first, under circumstances which would favour expansion. Then, as the air is slowly absorbed—which is well known to occur—the remainder becomes less dense, and keeps up the advantageous position in which the lung was placed at the time of the operation; while, throughout, the general elasticity of the air acts as a uniform but gentle pressure on the vascular walls of the abscess, helping to sustain the vessels, and to nullify the tendency to exude, which a vacuum, on the contrary, tends rather to favour."

Dr. Symes Thompson observes that in children and in sensitive female patients it is desirable to give a general

(c) "The Silk Ligature as a Method of securing the Ovarian Pedicle" (*British Medical Journal*, January 26, 1878).

anæsthetic during the operation, but that among men and women having self-control, local anæsthesia secured by ice and salt is all that is needed. The second puncture does not add materially to the pain or distress of the operation.

GREAT NORTHERN HOSPITAL.

A SEVERE LACERATION OF THE HAND, WRIST, AND FOREARM—SECONDARY HÆMORRHAGE—ANTISEPTIC DRESSINGS—RECOVERY WITH A USEFUL HAND.

(Under the care of Mr. W. SPENCER WATSON.)

Mary Jane E., aged thirty, a washerwoman, was admitted on January 18 with her right hand severely lacerated by its having been caught in a wringing machine. The skin over ths whole of the dorsum of the carpus and metacarpus was torn off and hanging loose. The metacarpal bones of the index and middle fingers were dislocated backwards at their carpal ends, and the hand was split between the index and middle fingers right up to the carpus. There was also a compound fracture of the ungual phalanx of the index finger, and a skin-deep wound about two inches long on the palmar aspect of the wrist. The soft parts were a good deal bruised, but the extensor tendons, though exposed, were apparently not much injured. The blood lost from the time of the accident till admission must have been considerable, and some trickling continued at the time of admission. The patient has always been strong and healthy, and was nursing a child five months old when the accident occurred. She was placed under the influence of ether, and the hand thoroughly examined. The dislocated bones were replaced, and the skin brought together with silver sutures; drainage-tubes being placed where necessary. The spray of carbolic acid was used during these manipulations, and the wound dressed with carbolised oil on lint, and surrounded by carbolised tow. 11.30 p.m.: Very restless. A hypodermic injection of a quarter of a grain of morphia given.

January 19.—1.30 a.m.: A great deal of oozing of blood from the hand. Much oozing of blood during the day. Pulse 120; temperature 101·2°. 11 p.m.: Hypodermic injection of morphia.

From this date till January 28 the pulse and temperature improved. There seemed, however, to be sloughs forming in the skin that was detached, and for a few days charcoal poultices were applied with a view to favouring their separation. The spray was used every time the dressings were changed.

The following is the account given by Mr. Wharry, the House-Surgeon, of the progress of the case:—

January 28.—6 a.m.: Called up to patient, whom I found bleeding very profusely from palm of hand amongst a mass of sloughing tissue; bed, sheet, and nightdress were saturated. Patient very pale. Pulse scarcely felt. I could find no bleeding point, so placed two pads on the radial and ulnar arteries above wrist, bandaged hand and arm firmly up to axilla, and had it raised. Poultice was discontinued, and oil-lint substituted. 11.30 a.m.: Patient very drowsy. Tongue furred; appetite fair; bowels open. Pulse 104, small and feeble. Expression anxious. Skin warm and perspiring; no more hæmorrhage; wound not disturbed; slight sanious oozing. Brandy ʒj., eggs ij., and milk Oj., statim. Temperature, morning 99°, evening 102·2°.

29th.—Patient passed restless night. Bowels not open; tongue furred; appetite fair. Pulse 120, small; temperature, morning 100·4°, evening 101·6°.

30th.—Good night, after a quarter of a grain of morphia hypodermically injected. Complains of pain in hand. Tongue furred; bowels open; appetite good. Pulse 100, small. Wound looking a little healthier; most of deep tissues of palm of hand have sloughed. Temperature, morning 100°, evening 100·6°.

31st.—Slept well. Some pain. Tongue furred; bowels open. Pulse 100. Wound in much the same condition. Temperature, morning 99·8°, evening 101°.

February 1.—Good night. Bowels open. Pulse 84. Hand much the same. Patient takes her food well. Temperature, morning 98·4°, evening 100°.

2nd.—In much the same condition. Temperature, morning 98·2°, evening 98·4°.

5th.—Good night. Pulse 84. Tongue clean; appetite very good. Temperature normal. Hand rapidly improving.

Patient got up on February 12, and made rapid progress, leaving hospital on March 19, with wound on dorsum of hand almost healed. There was no skin transplanted.

The wound was dressed with carbolised oil till January 26; then charcoal poultices with carbolised oil-lint next to the wound till January 28, then vaseline next to the wound and carbolic lotion (one part in forty) over it till March 10, when water-dressings were used. Carbolised tow was used as an outer dressing throughout.

Remarks.—In this case the severe nature of the injury in the first instance made it almost hopeless to attempt to save the hand, and when secondary hæmorrhage occurred the chance of doing so seemed still more remote. The result has quite justified an expectant plan, for the hand is undoubtedly a useful one in its present condition, and will, when the stiffness of the fingers has been overcome by passive movements, become more and more efficient. The antiseptic precautions taken in this case must be credited with a considerable share in the good results; and though the application of warm poultices will very probably be looked upon as objectionable, and the secondary hæmorrhage may possibly have been induced by their use, yet, at the time, they seemed the most suitable application, and were certainly more comfortable to the patient than the other dressings. The sloughing at one time threatened to be very extensive, but it was found that the deep surface of the true skin retained its vitality over a very large part of the back of the hand and forearm, and soon became covered by a healthy granulating surface, and subsequently by cuticle, though almost the whole of this part of the hand and lower part of the forearm had been completely stripped of skin at the time of the accident. At one time a large portion of this detached skin was of a livid colour, and sloughing of its whole thickness seemed inevitable. Under these circumstances it was thought desirable to employ poultices, with a subjacent layer of carbolised oil-lint, partly with a view to keeping up the vitality of the part by the warmth thus induced. There is reason for believing that the remarkable recovery of the deeper portion of the skin was in part due to this, though the stimulation of the circulation may also have excited the attack of secondary hæmorrhage. The method of dressing by vaseline spread upon lint with carbolic dressings over it has been very frequently adopted lately at the Great Northern Hospital, and is found to be as efficacious and not so troublesome as the dressings known as Lister's. The former adapts itself more evenly and accurately to the inequalities of an injured surface than the Lister's protective oil-silk, and is therefore well suited for such a case as that here related. The vaseline is absolutely free from any irritating qualities, and, though not an antiseptic, appears to be unaffected by septic influences. It is also free from the objection brought against other greasy substances used in the preparation of ointments: it never becomes rancid or decomposed.

Excision of Tuberculous Joints.—At the recent meeting of the German Surgical Society at Berlin, Prof. König read a paper "On the Results of Excision of Tuberculous Joints under the Antiseptic System." The number of excisions was 117, viz., 43 of the knee, 25 of the foot, 21 of the hip, and 28 of the upper extremity. Of these 74 were cured, but in only 4 instances by primary union; in the others either fistulæ remained or were formed at the end of several weeks. In 66 of these cases it was found, after periods from six months to two years, that complete healing had not taken place. In 18 of the 117 cases the wound remained tuberculous, and 25 terminated fatally—death resulting in 2 cases from "acute carbolismus," in 2 from sepsis, and 2 from tetanus, and in 18 from tuberculosis. According to König's four years' experience with the antiseptic procedure, 21·6 per cent. of the cases had already died or were suffering from general tuberculosis—a result nearly approaching that of Billroth's sixteen years' practice, which was attended with a mortality of 27 per cent. Prof. Esmarch's experience led him to the same conclusion, that the antiseptic procedure did not do much to save life in diseases of the joints, but he suggested that an earlier resort to the operation would be attended with better results; but Prof. König stated that, according to his experience, this did not influence the result.—*Wien. Med. Woch.*, April 17.

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Medical Times and Gazette.

SATURDAY, MAY 22, 1880.

THE ROYAL COLLEGE OF SURGEONS AND THE CONJOINT SCHEME.

The resolution come to by the Council of the Royal College of Surgeons, on Thursday last week, to give notice to the several medical authorities concerned in the Conjoint Scheme for England of the intention of the College to withdraw from that scheme, is subject to confirmation at the next meeting of the Council. But we take it that there can be no doubt that the resolution will be confirmed, not only or chiefly because the decision was arrived at without any serious opposition, but because it is a logical sequence in the chain of events that will result in the union of the College with the College of Physicians for the purposes of conducting a complete examination in medicine, surgery, and midwifery; and granting a full qualification to the General Practitioner. The question of a one-portal system under which there shall be established uniformity of examination throughout the United Kingdom, for a minimum qualification to practise, has been pretty thoroughly threshed out, and, even in its modified form of a conjoint examining board for each division of the kingdom, is hardly now supported with any earnestness, except by mere theorists, and by men who, whatever their acquaintance with the practice of the profession may be, have had little or no practical experience in teaching and examining. The fallacy and absurdity of the belief in uniformity of examinations, and the impracticability of any cut and dried, and nicely rounded divisional conjoint schemes, have been fully exposed; and this is so great a gain that we are not disposed to lament much the amount of time and labour that it has taken to arrive at such a conclusion. But certainly the time has now fully come for the English Colleges to drop all schemes and ideas that can interfere with or delay arrangements for their establishing as full and complete an examination as is practicable and desirable for a minimum qualification. There should be no hesitation about this, for it would be the most right and best course under any circumstances: the wisest and best for the colleges, the profession, and the public, should the Government leave medical legislation alone; and the most politic, should they determine to bring in a Medical Act Amendment Bill next year, for it seems much more probable that they would establish a State examination than compulsory conjoint boards. But we do not see that there is any likelihood of a Government Bill within any reasonable time. The Committee on the Medical Act Amendment Bills cannot report with any weight or authority this year, even should it be re-appointed. Of the men who formerly sat on it, Dr. O'Leary is lost to us for always, and Dr. Lush and Messrs. A. Mills and Wheelhouse are no longer in Parliament; while Mr. Forster and Mr. Lyon Playfair hold offices that would, we must suppose, make it impossible for them to be placed on the Committee again; so that there must be on it a number of men quite new to the subject, and who would have to get up all the mass of evidence already given. Moreover, the members of the Ministry who would have the management of any Government Bill on the subject are quite new to it; and the Marquis of Ripon, who has worked at it, and is generally credited with knowing something about it, has been sent to India. There is thus time left for our great bodies to put their houses in such order that a Medical Bill as regards them would be a work of supererogation. The examinations at the College of Surgeons are by general consent vastly improved: the new regulations of the College of Physicians are the most liberal extant; whilst we know well that no man who does not understand his work will pass there. Let them unite to give a diploma which will be universally recognised as the strongest in the kingdom.

ABDOMINAL SURGERY.

Professor von Nussbaum, of Munich, is well known as a bold and fearless operator. He has already introduced many new operations—among others, nerve-stretching and rectotomy—which our forefathers would hear of with something akin to incredulity. Now we find him attempting to remove the pylorus for what was diagnosed as cancer. On cutting down on it, the pylorus, however, proved to be healthy, and the tumour or induration was found to affect the liver. Nothing daunted by the mistake, Nussbaum, who was conducting his operation under the strictest antiseptic precautions, decided to incise the organ and put in a drainage-tube, in the hope that irritative softening might ensue, and so lead to its absorption. It was in an address before the Munich District Medical Society that he referred to this subject and to peritoneal surgery in general. In a manner all his own the celebrated operator contrasted the results of peritoneal wounds under the present methods of treatment with those which were formerly obtained under the older methods. He says (*Aertzliches Intelligenz-Blatt*, January, 1880), "When nowadays we read that the peritoneum may, fearlessly and with impunity, be punctured, incised, lacerated, bruised, or burnt, provided we keep off all infectious germs, one might be inclined to think that our predecessors had lived under a gigantic error in regarding abdominal injuries as almost fatally dangerous, while in reality they have proved themselves to be quite unattended with danger, seeing that we now remove from the belly tumours weighing fifty to sixty pounds, the patients scarcely feeling ill the while, and not experiencing either elevation of temperature or even a rise in the pulse-rate." Fortunately the facts are beyond dispute, and yet the older surgeons were nowise in error, for peritoneal wounds were dangerous, and in similar surroundings are so to-day. "The

difference between the old times and the present simply consists in this: that we have learnt the sources of the danger. An enemy whose strength and position are known is easily overcome."

Among the principal dangers attending this kind of injury must be reckoned, he says, the great susceptibility to the influence of cold which the peritoneum is known to possess. "This enormous, constantly moist surface, when exposed, leads to such a rapid cooling of the blood, that immediately reflex paralytic conditions of the heart, and even death, are threatened." The second source of danger is the almost unlimited power of absorption which the peritoneum possesses; and thus, any exudation into it which may have undergone unhealthy metamorphosis is liable to bring about rapid and severe septic conditions. Thirdly, peristaltic action, by means of which any exudation that gets into the peritoneal cavity, an enormous surface, is stirred up and smeared over the whole of its contents. Fourthly, movements of respiration, the rise and fall of the diaphragm and small intestine aiding the absorption. Fifthly, peritoneal wounds are dangerous because of the little spaces which everywhere exist, into which secretions may find their way and lie hidden and decompose. And, finally, there is the danger of infection through the ill-smelling intestinal gases, which especially favour sepsis; and, he continues, even if the bowel itself be not injured, gases find their way in or out. Thus it is that the pus of all abscesses forming in the neighbourhood of the intestines smell of fæcal gases; and not only gases, but after concussion and its consequent paralysis, owing to the phenomena which attend it, an exosmosis of fluids may actually take place. On the whole, therefore, we see that there were good grounds for the dread which has hitherto always been felt of peritoneal injuries, whether accidental or applied by the surgeon for surgical purposes. Since, however, the causes of this great danger have come to be understood, and the means by which they may be overcome have been learnt, the indications for operation and prognosis afterwards have been greatly modified.

Professor Nussbaum then considers enterotomy and gastrotomy, and the cases in which these operations may be practised. In speaking of cases of internal strangulation, he said that "thousands now lie in their graves who have died from this distressing disease, while surgeons have stood by as mere lookers-on, unable to help their patients." For although opium could relieve pain for awhile, it generally failed to cure the obstruction. And as regards laparotomy, formerly the mortality was 70 per cent., that of Littré's operation 47 per cent., that of Amussat 30 per cent., while those who did recover were, on account of their infirmity, often very miserable and quite unfit to associate in socicty.

Now, in consequence of greater skill, and of the experience of past operations, the results are much more favourable. He thinks that a small opening, just large cnough to let out fæces, is all that is required at first; for often, after tension of the distended intestines has been relieved, the twist will right itself; or, if the obstruction be due to invagination, the gut will slough and come away. The opening is then allowed to close; but, if a cure cannot be effected, the opening should be enlarged, and a permanent artificial anus established.

As regards gastrotomy, he speaks most hopefully. Quoting some Vienna statistics of cancer, he mentioncd that of 903 cases affecting the stomach, 542 occurred at the pylorus, and that of these about 60 per cent. offered favourable chances for operative interference. He pointed out that portions of the stomach and pieces of gut had been successfully removed in animals in many instances; and he believed that we were not only justified, but called upon, to operate when circumstances seemed to call for it.

In support of this doctrine he relates the following case:—A man, aged fifty-six, was sent to him with what was believed to be a cancerous tumour of the pylorus, and which could be felt as a swelling of the size of an egg over the pyloric region. It was accompanied by intense pain. An indurated cicatrix on the abdominal wall led to the discovery that he had been accidentally injured with a pistol, and it was then thought that the wad might have lodged. After watching the case for awhile, it was decided to cut down upon it, and explore, being ready for any eventuality. The lesion proved to be an "inflammatory exudative process" in the liver. It was not sufficiently circumscribed to be removed; and furthermore, it seemed not to be a deposit in, but rather a part of, the liver. Professor Nussbaum, under these circumstances, put in a drainage-tube, in the hope that absorption of the indurating material might be brought about. The pain almost ceased, and the induration lessened. The patient left the hospital very much better for his operation, but not quite cured. He wrote to his doctor after some time, asking to undergo a second operation, in the hope that he would thus get quite rid of his trouble.

Nussbaum thinks that with antiseptic precautions we shall be able to extend our peritoneal operations to an almost unlimited extent. He believes we may excise the pylorus, when cancerous, with confidence of success. If this should prove to be the case, we have indeed in antiseptics (so-called) a valuable addition to surgical science. But we trust that in this, as in other arts, discretion will be regarded as the better part of valour.

THE WEEK.

TOPICS OF THE DAY.

The sum of £9250 has been distributed among the principal Liverpool medical charities this year by the Committee of the Hospital Sunday Fund. Last year the grants made amounted to £8600. The three large general hospitals are benefited by the following sums, viz.:—Royal Infirmary, £2775; Royal Southern Hospital, £1480; Northern Hospital, £1295. The remaining £3700 is distributed in varying amounts, according to work done, among thirteen other medical charities.

A deputation from the City Commissioners of Sewers had an interview last week with the Home Secretary, who had enlisted the services of Mr. Dodson and Sir John Lambert to support him, to ask whether the present Government contemplated dealing with the subject of the water-supply of the metropolis this session; and if so, on what basis any Bill on the subject would be founded. The deputation wished to know whether the negotiations of the late Government with the water companies would be adhered to, or, if not, upon what principle the terms of purchase would be framed. A long conversation ensued between the Home Secretary and the deputation, in which Sir William Harcourt endeavoured to ascertain the views of the gentlemen who had waited upon him on the Bill which had been introduced by his predecessor. Finally, he wound up the interview by remarking that being fresh to the duties of his office he required the best information he could obtain on the whole subject. He suggested that the deputation should take the matter earnestly into their consideration, and answer the several questions he had addressed to them, the principal among them being whether they wished the agreements come to by the late Home Secretary to stand or terminate. He did not wish either to adopt or condemn any scheme for taking over the present companies' works, but to leave the question to the consideration of those who were better capable of forming an opinion on the subject than himself, especially those who represented the ratepayers

The great question was, what public body in London was sufficiently representative all round to undertake the duties of a water corporation for the entire metropolis. He knew of none. He therefore urged them to consider the whole matter, and inform him of the result of their deliberations. The new Home Secretary throughout the interview appears to have carefully avoided committing himself to any opinion upon Mr. Cross's Bill, but he will nevertheless find that public opinion is so seriously enlisted in this question that legislation must follow; and, on the whole, the sooner the better.

We last week announced that the Council of the Socicty of Arts had determined to invite a public conference on the question of the water-supply of the metropolis, and had appointed a committee to consider and report thereon. This committee having met several times, and given full attention to the subject, and having confidence that the supply of the best water to the metropolis will be fully considered by her Majesty's Government at an early period, reported that they were of opinion that no conference should now be held; and the Council have accordingly resolved not to summon the conference, as previously proposed.

It is always satisfactory to record the sayings of a public man who has the courage of his opinions, and Lord Norton's speech in opening a coffee-tavern at Leamington last week deserves to be reproduced. He said that the coffee-taverns which had been established in all parts of the country were rather to be considered as counter-attractions to those who indulged in intoxicating drinks to excess, than as an incentive to self-denial of the good gifts of God, which were intended to be used in moderation and with thankfulness. Unfortunately, they must allow that the cause of abstinence in this country had ample justification in the excess which prevailed. He had 100 votes offered him on one occasion when he was seeking election as a member of Parliament, on condition that he went in for total abstinence. That, they must admit, was a tempting offer. His answer was that he lived a pretty hard, laborious life of mental work, and he could not do without an occasional glass of sherry, and he would not give that up for the sake of those who could not avoid getting drunk. He did not see why the sober man should be sacrificed to the drunken man.

The first stone of the Norwood Waterworks was laid last week, at the pumping station, which is situated close to the Southall Station of the Great Western Railway. It may be mentioned that there are two Norwoods within the ten-mile radius of London, one near the Crystal Palace, and the other in Middlesex. It was at the latter that the ceremony in question took place. A limited liability company has been formed for the purpose of supplying water to the populous and increasing districts of Southall, Southall-green, North Hyde, Frogmore-green, and Norwood. It is also intended to extend the mains of the company through the towns and districts of East Bedfont, Cranford, Feltham, and Hanworth. The company are now engaged in sinking a shaft through the chalk formation, from which their supply is to be obtained, and they hope to obtain a pressure which will enable them to give an adequate supply to the highest level in the district, which is now chiefly dependent on shallow surface wells and streams for its supply. The ceremony was performed by Sir George Innes, Bart., in the presence of a large party of gentlemen interested in the undertaking.

Not long ago we had to chronicle the failure of an attempt to bring sea-water from Brighton for the use of the metropolis. The Bill brought into Parliament for this purpose was opposed by the Metropolitan Board of Works on the ground that the scheme would entail disturbance to the roadways of London in laying down and maintaining the efficiency of the necessary pipes for conveying the water. It would now appear that the Great Eastern Railway have devised a plan which will insure a sea-bath to the residents of London without Parliamentary sanction. They have undertaken to supply sea-water to any part of London, within their ordinary delivery, at the rate of sixpence for three gallons. The water is to be brought from Lowestoft, and delivered at any address in air-tight cans, for the price named, and, as an additional convenience to the purchaser, the cans will, if required, be left until the following day, when the Company's vans will call for them, without extra charge. If the scheme should prove remunerative it will probably be adopted by other railway companies having seaside stations, and perhaps the boon will eventually be extended to inland provincial towns. An opportunity will thus be afforded of ascertaining whether there is really a demand for sea-water, and by a much less costly process than laying down some fifty miles of pipes with the necessary pumping apparatus.

Strenuous efforts are being made at the present time to counteract in some slight degree the enormous spread of the metropolis into the surrounding country, by utilising existing open spaces as recreation grounds for the poorer classes; and at the last week's meeting of the Metropolitan Board of Works an influential deputation, headed by the Duke of Westminster, attended for the purpose of presenting a memorial on the subject of the transfer to the Board of the power at present exercised by the trustees of Lincoln's-inn-fields over the gardens there. The gardens in question are the largest of the kind in London, comprising nearly seven acres, and, as is well known, they are situated in the midst of one of the most densely crowded parts of the metropolis. Applications have already been made to the trustees of the gardens to consider by what means, and to what extent, the gardens might be made available to the public, but they have refused to move in the matter, alleging that they are prevented by the terms of their trust from opening the gardens to the public at any time. The Duke of Westminster explained that the object of the memorialists was to make the lives of the poorer classes happier than they are at present. The poor in the neighbourhood of Lincoln's-inn-fields were much crowded together, and stood in great need of some open space that could be used for the purposes of recreation. The principal opposition came from the tradesmen who did not live in Lincoln's-inn-fields, but who, on payment of a certain rate, obtained keys to the gardens, and objected to their being made public. He asked the Board to take the subject into their consideration, as they were the only body having the full powers to deal with it, and to confer this benefit upon the poor of the neighbourhood. It was eventually decided to refer the matter to the Works and General Purposes Committee for consideration, and Sir James McGarel Hogg assured the deputation that every attention should be given to their memorial. At the same meeting the Works Committee reported that the Surrey Justices had refused to accede to their request that the proposed sale of the site of Horsemonger-lane Gaol might be postponed until the Board had decided what steps they would take towards securing it as a recreation-ground for the locality; and the Committee had therefore no alternative but to allow the matter to drop.

An inquest held, last week, at the Parkside Lunatic Asylum, near Macclesfield, elicited some singular particulars respecting the death of one of the inmates. The deceased man, who was a native of Birmingham, was taking his usual airing in the Asylum grounds, when he was found by an attendant eating leaves from the laurel-trees growing around. Subsequently he was taken very ill, and died in a couple of

hours, death being attributed to the prussic acid contained in the laurel-leaves. The jury returned a verdict of "Accidental poisoning," and made a recommendation that the laurel-trees should in future be guarded from the inmates of of the Asylum.

In accordance with a State law on the subject, recently passed, the work of examining the 5000 *employés* of the Pennsylvania Railway Company as to their power of distinguishing colours and forms was begun in Jersey city on April 1 last. Acuteness of vision was tested by means of printed cards placed at a distance of twenty feet; also by means of small openings in a screen illuminated on the other side. Many who successfully passed these ordeals failed signally in the colour-tests. Three skeins of woollen yarn were used, one being light green, the second rose, and the third red. Each of these was placed on a table in front of the person examined, at a distance of three feet, and with the vision of either eye obstructed by a spectacle frame, the man was requested to name the colours, also to pick out a similar shade to one or other of the three specified from different skeins of woollen yarn numbered from 1 to 36. One man correctly designated the test skein as red, but on being told to select a similar shade from the skeins before him, he picked three shades of blue, two of yellow, and one of red,—he could distinguish no difference; and the same thing happened to half a dozen others who followed him. The skeins in the row were then divided into three sets, with twelve numbers in each. Some men proved able to distinguish all the shades of green, but utterly failed in picking out the different shades of red. It is reported that the railway officials were greatly impressed by the results obtained, which satisfactorily show the necessity for establishing similar test examinations for railway servants all over the world.

There having been 500 cases of small-pox in the last few weeks in Antwerp, Diest, Jumetz, and Gilly, M. Crocq, a physician and senator, has pressed the Government to make vaccination compulsory. The Minister of the Interior, however, remarked that it was too late in the session, the Lower House having already finished its business. All that could be done, he said, was to distribute lymph gratuitously.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

At the ordinary meeting of the Council of the Royal College of Surgeons, held on Thursday, the 13th inst., the following business was transacted in addition to the adoption of the important resolution, which we published last week, relating to the withdrawal of the College from the Conjoint Scheme. The College Triennial Prize was presented to Mr. G. A. Woods for his essay "On the Anatomy and Physiology of the Third, Fourth, and Sixth Nerves, as illustrated by observation and experiment in health, and by reference to the effects of injury and disease." A letter was read from Mr. Simon, resigning his seat as a member of the Council; and the usual arrangements were made for the annual election of Fellows on the Council on the first Thursday in July. Mr. Holmes' motion that Clause 7, Section 7, of the By-laws, viz., "That every member present from the commencement until the termination of any meeting of the Council shall be entitled to one guinea, shall be annulled," was considered, and rejected by a small majority. The following proposals, made by Mr. Marshall, were considered and adopted:—"1. That, under the powers given by Section 14 of the By-laws, the Council do proceed, as soon as practicable, to institute an examination in elementary anatomy and physiology, and in such other subjects as the Council shall from time to time determine, to be passed by candidates for the membership of the College at or after the expiration of their first year of study. 2. That it be referred to the 'Committee on Examinations in Anatomy and Physiology' to prepare and submit to the Council, for approval, the necessary regulations for defining and conducting such examination. 3. That it be referred to the Committee on By-laws to prepare the revised or new formulæ which will be required for the re-arrangement of the payment of fees by the institution of such examination." The Recommendation, constituting the first report of the Committee "on the Necessary Arrangements for the institution of Additional Examinations for the Diplomas of Member and Fellow of the College," which was adopted by the Council, subject to confirmation at the next meeting, was as follows:—"That, in view of the uncertainty which prevails as to the compulsory establishment of a conjoint scheme in each division of the United Kingdom, and the desirability of some combination being effected amongst the English medical corporations for the purposes of a complete examination in medicine, surgery, and midwifery, the Council should give notice to the several medical authorities concerned in 'the Conjoint Scheme' of this College to withdraw from that scheme, so that the independent action of the College may be thereby secured."

THE PHARMACEUTICAL SOCIETY'S DINNER.

The annual dinner of this Society was held on Tuesday evening at Willis's Rooms, when everything passed off in the most satisfactory way. The chair was occupied by Mr. Sandford, the esteemed President of the Society, than whom no one could more worthily fill it. Much credit was due to the Committee for the completeness of their arrangements, and we might venture to name Messrs. Carteigh and Bremridge as not deserving the least praise. On Wednesday evening a largely attended *conversazione* was held in the South Kensington Museum.

THE ROYAL COLLEGE OF SURGEONS IN IRELAND AND MEDICAL ADVERTISING.

At a recent meeting the Council of the Royal College of Surgeons in Ireland adopted the following resolution:—"Resolved, That the practice of indirectly advertising, through the medium of sensational articles inserted in the public papers, being contrary to the dignity of the profession, is repudiated and condemned by the Council of this College." We highly commend the laudable spirit which actuated the Council to pass this resolution, and we cannot but express regret that such a step should be required. It would have been well, however, had the Council rested satisfied with informing the Fellows and Licentiates of the College that the foregoing resolution had been passed. Instead of doing so, the Council were so ill-advised as to send copies of the resolution to the Dublin daily papers, with a request that the editors would aid the Council in giving force to the resolution. The result has been just what might have been expected. In terms of studied politeness the Council have been told that the members of the Press know their own business, and that it would be well for the Council to learn to follow their example. *Ne sutor ultra crepidam!*

THE METROPOLITAN COUNTIES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

Mr. John Wood, the President of the Metropolitan Counties Branch of the British Medical Association, gave a *conversazione* in the South Kensington Museum on Friday week. We need hardly say that it was very numerously attended,—Mr. Wood's position and popularity alone would have fully insured that; but in addition to the desire to pay honour to him, there were the attractions of the South Kensington Museum and of excellent music.

GLASGOW HOSPITAL AND DISPENSARY FOR THE DISEASES OF THE EAR.

A MEETING was held on Thursday, May 13, in Glasgow, for the purpose of founding a hospital and dispensary for diseases of the ear for Glasgow and the West of Scotland; Dr. Andrew Buchanan, President of the Faculty of Physicians and Surgeons, being in the chair. A constitution was adopted, and office-bearers and an honorary medical staff were elected. The following are the honorary medical staff:—Dr. Peter Stewart, Senior Consulting Physician; Dr. James Morton, Senior Consulting Surgeon; Dr. J. Cowan Woodburn, Consulting Dental Surgeon; Dr. David Foulis, Consulting Surgeon for Diseases of the Throat; Dr. A. K. Irvine, Dr. A. L. Kelly, and Dr. John Gardner, with Dr. Jas. Patterson Cassells, Aural Surgeon. It appears that the proposed hospital and dispensary is an extension of the Dispensary for Diseases of the Ear which has for the last seven years been conducted by Dr. Cassells.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AT the meeting of the College of Physician held on May 13, Mr. John Roberts Thomson, M.D. Edin., of Bournemouth, was elected to the Fellowship of the College. A proposal to admit, under regulation, retired medical officers of a certain rank to the privileges of the library and reading-room of the College, was approved.

FEVER AND SMALL-POX IN THE METROPOLIS.

AT the last week's meeting of the Metropolitan Asylums Board, the returns presented showed that at the Fever Asylum, Stockwell, during the fortnight, 34 patients had been admitted, 7 had died, and 25 had been discharged, leaving 97 under treatment—namely, 92 scarlet fever patients and 5 suffering from enteric fever. At Homerton, during the same period, 13 had been admitted, 3 had died, and 18 had been discharged, leaving 86 under treatment—63 scarlet fever patients, and 23 cases of enteric fever. At Deptford 9 had been admitted, 1 had died, and 18 had been discharged, leaving 64—namely, 51 scarlet fever patients, and 13 enteric fever cases. There was not one case of typhus in any of the asylums—a fact which indicates an improved sanitary condition in the low quarters of the metropolis, from which this disease used seldom to be absent. The total of the cases admitted in the fortnight was 56, as against 64 in the previous fortnight, and there are 247 cases altogether, as against 275 a fortnight ago—a decrease of 28. In regard to small-pox, 45 cases had been admitted during the fortnight into the Homerton Asylum, 4 had died, 33 had been discharged, and 98 remained under treatment. At the Stockwell Asylum 34 had been admitted, 6 had died, and 6 had been discharged, leaving 34 under treatment. At Fulham Asylum 7 had been admitted, 12 had been discharged, and 12 remained. At Deptford Asylum 3 had been admitted, 1 had died, and 22 had been discharged, leaving 16 under treatment. In all, 89 had been admitted during the fortnight, 11 had died, and 73 had been discharged, leaving 188—an increase of 5 in the number under treatment a fortnight ago; but the number admitted is 7 less this fortnight than in the previous fortnight. The Board has at the present time 316 beds available in its asylums, without reckoning the accommodation at Hampstead.

ST. MARK'S OPHTHALMIC HOSPITAL, DUBLIN.

THE Board of Governors of this institution met on Monday, May 10, for the purpose of electing a Surgeon in the room of the late Dr. Rainsford, when Mr. John Benjamin Story, M.B., M.Ch. Dub., Examiner in Ophthalmic Surgery in the University of Dublin, was unanimously appointed to the vacant office.

THE GENERAL LYING-IN HOSPITAL, LAMBETH.

THE Physicians of the General Lying-in Hospital—Drs. Hayes, Fancourt Barnes, and J. A. Mansell-Moullin—have, we hear, all resigned their appointments during the course of the last week. The House-Physician, Dr. Hurst, had previously also declined to continue his services to the Hospital. The grounds of this proceeding are announced to be the mal-administration of the Hospital in some points respecting its nursing arrangements, and the conduct pursued towards the medical staff by the Chairman and the Lady Superintendent. The Physicians decline to continue to hold offices "in which responsibility is divorced from authority," and have in written statements to the Board declared themselves unable to secure to the patients that immunity from intercurrent diseases which in a lying-in hospital must form a primary object. An inquiry is announced; and pending the inquiry, those who have fulfilled a painful duty in tendering their resignations have a right to expect that no professional man will step in to defeat the salutary object in view by accepting posts vacated in such circumstances. One physician was, we believe, immediately applied to by the Chairman, and a money payment was offered to him to take office temporarily, but, on learning the facts, he promptly and honourably refused to accept the position.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

AT the last meeting of the College, the following important amendment to By-law 69, which deals with the hospital attendance required of candidates for the licence to practise medicine, was read a third time and adopted, viz.:—"That the last paragraph of Clause 5 of By-law 69 be omitted, and the following substituted for it:—'After the 1st day of January, 1881, every candidate for the licence in medicine of this College shall be required to produce evidence that he has, for not less than three months, studied fever in a recognised hospital containing fever wards, and recorded from daily personal observation at least five cases of fever to the satisfaction of the attending clinical physician, as attested by his signature.'"

THE THAMES CONSERVATORS AND THE BOARD OF WORKS.

THE report of the arbitrators appointed to decide certain differences which had arisen between the Conservators of the Thames and the Metropolitan Board of Works, as to whether certain banks in the river Thames have been formed from the flow of sewage at the outfalls, and as to whether they are an obstruction to the navigation of the river, has been published, and it is stated that the umpire, Sir C. A. Hartley, entirely concurs with the decision given. The decision is to the effect that the Barking and Halfway Reaches, where the three banks are situated, are now better for navigation than they were before the outfalls were opened, except in a minor degree which is explained; and that the banks in question have arisen from dredging operations carried on by the Thames Conservators, or sanctioned by them. Further, that the water in the tidal portion of the Thames contains a considerable amount of suspended matter, derived partly from the basins of the Thames and its tributaries, partly from the washing away of the foreshores of the tidal estuary where unprotected, partly from material brought up from the mouth of the river by the flood tide, partly from sand and mud stirred up in the course of dredging operations, partly from denudation of the river-bed, partly from sewers in districts outside the metropolitan area, and partly from the sewers of the Metropolitan Board; that the proportion contributed from this latter source is small compared with the total amount of suspended matter in the whole volume of tidal water which flows past the

outfalls on every tide; and that the three banks are composed of matter which had been held in suspension in the water, and had been derived from the several sources above mentioned. Whilst, therefore, the sewage from the metropolitan outfalls may have contributed to their contents, the three banks cannot be said, in the sense of the Act of 1870, to have arisen from the flow of sewage at the outfalls, and the arbitrators are, therefore, of opinion that the Metropolitan Board of Works should not be called on to remove, or contribute any portion of the expense of removing, the three banks, or any of them. That each party bear their own costs of the reference and pay one-half the costs of this report and determination.

THE VICEREGAL COURT IN IRELAND.

We understand that the following medical and surgical appointments have been made in the household of his Excellency Earl Cowper, K.G., Lord Lieutenant of Ireland:—Physicians in Ordinary: George W. Hatchell, M.D.; Thomas Nedley, M.D. Aber.; and Christopher J. Nixon, M.B. Univ. Dub., F.K.Q.C.P. Surgeons in Ordinary: Robert McDonnell, M.D. Univ. Dub., ex-President and Fellow of the Royal College of Surgeons in Ireland; and Edward Dillon Mapother, M.D. Queen's Univ. Ire., etc. Surgeon-Dentist in Ordinary: Daniel Corbett, M.R.C.S. Eng.

ON SOME ANALOGIES BETWEEN THE NERVOUS SYSTEM AND THE ELECTRIC TELEGRAPH.

(*Continued from page* 489.)

Some of the remarks and expressions just given expression to may appear to favour the doctrine of materialism—that the mind and soul are the direct product of bodily and material forces and activities—forces and potentialities essentially and *ab æterno* inherent in matter itself. To my mind such an issue is not reachable by any discoveries, observations, or reasonings with which I am acquainted. But even the dread of arriving at any such dreary terminus (if there be no other) ought not to deter us from the search after truth; and he is a coward, and no true philosopher, who would shrink from accepting well-authenticated facts, and the reasonings or deductions that can be legitimately founded upon them, from fear of the conclusion to which they might lead him. Even in the boldest flights and speculations of the geologists and evolutionists, the physicists and physiologists, which I have been able to follow, no such result has, to my mind, been attained.

How life was originally imparted, and how it is successively transmitted from one individual to another; how the growth of the body, its varied functions, and the formation of those diverse and complicated materials composing it, take place; how the instincts, passions, feelings, thoughts, and powers of the mind are developed in the body, and how governed and directed by the will, and applied to practical uses, so as to produce those wonderful results we see in the world around us,—these are a few of those standing miracles which confront one at almost every stage of his investigations. On such occasions, like the Moslem called to prayer by the living voice of the Muezzin, the student feels impelled, with emotions of "wonder, love, and praise," to fall prostrate in soul with *his* simple but emphatic adoration of God is God, God is great—softly responded to by the still small voice from the recesses of his own heart, "And He is my Father and Preserver, all-wise and good."

To carry out a little further Sir Isaac Newton's figure on this subject, it may be said that, whenever the philosopher in his explorations approaches the confines of the great ocean of theological truth by which his ground is on all sides surrounded, he will ever and anon, by a dash of the spray wafted from it, feel himself recalled to a salutary sense of his own insignificance, and the vast extent of undiscovered and of undiscoverable truth comprehended in the existence and constitution of the world, and the universe of which it is a part.

But there is another and greater, because more imminent, danger lying in the pathway of the scientific student, who is apt to forget that analogies are not solid or safe foundations to build conclusions upon, and that in the case we have been considering the will and the intelligent agency of the telegraphists are most important and indispensable links in the series of operations which constitute the analogy. The danger is that of coming to the conclusion that because he is able to account for, or fancies that he is able to account for, all the manifestations and workings of the mind, by what are called the laws of material science, therefore the mind, with all its marvellous powers, is no more than the product and result of the bodily organisation, and there is, properly speaking, no immaterial part—no soul—belonging to man, and consequently there is no immortality, no life after the death of the body.

Such a conclusion as this would, of course, be subversive of Christianity, the chief foundation of which is the fact of Christ's resurrection, by which He "abolished death, and brought life and immortality to light" (2 Tim. i. 10). Withdraw this, and the main part of the structure of Christianity would fall to pieces—that framework by which society is held together, and by which all its parts are enabled to work harmoniously and safely. To Christian countries what the result of such a catastrophe would be it is difficult to conceive, but undoubtedly it would be disastrous. That there is a possibility of such a change falling upon us, let me quote what Mr. Froude, one of the acutest intellects of the day, says in his essay on Progress ("Short Studies on Great Subjects," second series, vol. ii., page 244):

"The Egyptians in the midst of their corruptions had inherited the doctrine from their fathers, which is considered the foundation of all religion. They believed in a life beyond the grave; in the judgment-bar of Osiris, at which they were to stand on leaving their bodies; and in a future state of happiness or misery as they had lived well or ill upon earth. It was not a speculation of philosophers—it was the popular creed; and it was held with exactly the same kind of belief with which it has been held by the Western nations from their conversion to Christianity.

"But what was the practical effect of their belief. There is no doctrine, however true, which works mechanically upon the soul like a charm. The expectation of a future state may be a motive for the noblest exertion, or it may be an excuse for acquiescence in evil, and serve to conceal and perpetuate the most enormous iniquities. The magnate of Thebes or Memphis, with his huge estates, his town and country palaces, his retinue of eunuchs, and his slaves whom he counted by thousands, was able to say to himself, if he thought at all, 'True enough, there are inequalities of fortune. These serfs of mine have a miserable time of it, but it is only a *time* after all; they have immortal souls, poor devils! and their wretched existence here is but a drop of water in the ocean of their being. They have as good a chance of Paradise as I have, perhaps better. Osiris will set all right hereafter; and for the present rich and poor are an ordinance of Providence, and there is no occasion to disturb established institutions. For myself I have always drawn a prize in the lottery, and I hope I am grateful. I subscribe handsomely to the temple services. I am myself punctual in my religious duties. The priests, who are wiser than I am, pray for me, and they tell me I may set my mind at rest.'

"Under this theory of things the Israelites had been ground to powder. They broke away. They too were to become a nation. A revelation of the True God was bestowed on them, from which, as from a fountain, a deeper knowledge of the Divine nature was to flow out over the earth; and the central thought of it was the realisation of the Divine government, not in a vague hereafter, but in the living present. The unpractical prospective justice which had become an excuse for tyranny was superseded by an immediate justice in time. They were to reap the reward of their deeds, not in heaven, but on earth. There was no life in the grave whither they were going. The future state was withdrawn from their sight till the mischief which it had wrought was forgotten. It was not denied, but was veiled in a cloud. It was left to private opinion to hope or to fear;

but it was no longer held out either as an excitement to piety, or a terror to evil-doers. The God of Israel was a living God, and his power was displayed visibly and immediately in rewarding the good and punishing the wicked while they remained in the flesh.

"It would be unbecoming to press the parallel, but phenomena are showing themselves which indicate that an analogous suspension of belief provoked by the same causes may possibly be awaiting ourselves. The relations between man and man are now supposed to be governed by natural laws which enact themselves independent of justice. Political economy is erected into a science, and the shock to our moral nature is relieved by reflections that it refers only to earth, and that justice may take effect hereafter. Science, however, is an inexorable master. The evidence of a hereafter depends on considerations which science declines to entertain. To piety and conscientiousness it appears inherently probable; but to the calm, unprejudiced student of realities, piety and conscientiousness are insufficient witnesses to matters of fact. The religious passions have made too many mistakes to be accepted as of conclusive authority. Scientific habits of thought, which are more and more controlling us, demand external proofs which are difficult to find. It may be that we require once more to have the living certainties of the Divine government brought home to us more palpably; that a doctrine which has been the consolation of the heavy-laden for eighteen hundred years may have generated once more a practical infidelity; and that by natural and intelligent agencies in the furtherance of the everlasting purposes of our Father in heaven, the belief in a life beyond the grave may again be about to be withdrawn."—Page 347.

Another and still higher authority—one who has been looked upon as the model logician and truth-seeker in this generation, and has given a direction to the current of its thought: I allude to John Stuart Mill—has spoken out still more decisively on the subject. Apparently afraid during his lifetime to give expression to his belief on this momentous subject, he, by the autobiography which was published after his death, may be said to have laid a train which, on his decease, caused the explosion of a mine fraught with desolation and dismay to all within its reach.

Though candid enough to admit that it would be better for mankind if the current and almost universal belief in an after-life were true, he gives the deliberate verdict of his authority to the contrary conclusion as his legacy to the world.

(*To be continued.*)

Waterproof Paper.—This useful substance (the advantages of which are noticed in our number for April 3, page 370), originally devised by Dr. Keen of Philadelphia, is now sold under the name of "Mead's Surgical Dressing Paper." Dr. Jones of Ohio says that "it provides an excellent substitute for rubber tissue or oiled silk, at a trifling cost as compared with these articles. Besides its use in surgery, the practitioner of medicine can make this paper available as a covering for wet applications, whether general or local, and give his patient the benefit of a continuous bath, when desirable, with a trifling amount of trouble and cost. Dr. Keen is entitled to the gratitude of the profession and our patients." Except in large quantities the selling price is 7 cents a yard.—*Boston Med. Jour.*, April 22.

Treatment of Hysterics.—In a clinical lecture Dr. Goodell says:—"When you are called to treat a young girl with a hysterical attack, there are three things which you had better do: 1. Institute at once firm pressure in the neighbourhood of both ovaries. This is very apt to quiet the patient at once. 2. Administer an emetic. I have found that a woman who is well under the action of an emetic has not the opportunity to do anything else than be thoroughly nauseated. Give a full dose of ipecac. and a grain of tartar emetic. 3. Take a good-sized lump of ice and press it right down upon the nape of the neck. This method of controlling the spasm will often act charmingly. It produces quiet by its powerful influence on the nervous system. When the attack is entirely under control, the best method of preventing another attack is to administer a full dose of assafœtida—none of your small two or three grain doses, but ten grains all at once."—*Boston Med. Jour.*, April 15.

FROM ABROAD.

Diagnosis of Cancer of the Breast.

Dr. Samuel W. Gross, in a clinical lecture delivered at the Philadelphia Hospital (*Boston Med. Jour.*, March 25), enters upon this question, his observations being based upon 100 cases of cancer of the breast that have come under his care, and 140 cases of non-carcinomatous tumours. After a detailed statement of the points of difference, he sums them up as follows:—

"The points in favour of carcinoma are, therefore, non-development before the age of twenty, greatest frequency after forty, irregular shape, almost uniformly densely hard and knobby feel, immobility in the gland, attachments to the skin and deeper structures, solitary origin, comparatively small volume and slow growth, retraction of the nipple, infiltration of the lymphatic glands, invasion of the skin by small nodules, non-enlargement of the subcutaneous veins, limited ulceration without any tendency to fungous protrusion, and the thickened, indurated, and everted edges of the ulcer. The diagnosis of *non-carcinomatous* tumours is based, on the other hand, upon their occurrence, in every sixth case, before the age of twenty, their greatest frequency before the fortieth year, their multiplicity in one breast (in one case out of sixteen and a half), their peripheral situation, their rounded or ovoid and bossed outline, the firm consistence of the smaller and the unequal feel of the larger, their mobility in or on the gland and adjacent tissues, their comparatively rapid growth and bulky size, the natural appearance of the skin, the enlargements of the subcutaneous veins when they are voluminous, their tendency to ulcerate and protrude late in the disease, and the absence of adhesions between the fungus and margin of the ulcer, and their freedom from retraction of the nipple, nodules in the skin, and taint of the associated lymphatic glands.

"There are many interesting and highly instructive features in the symptoms of both classes of tumours which I might discuss with profit, but I will limit my remarks to two points. Among the more prominent signs of carcinoma are those which indicate local infection of the surrounding tissues; and a knowledge of the date of their appearance will prove serviceable in deciding the question of an operation. Nodules may be looked for in the skin in fourteen months, the contaminated lymphatic glands of the axilla may be detected in fifteen months, ulceration may be expected in seventeen months, and deep adhesions take place in twenty-one months. These figures denote the average date, but I have known infiltration of the skin, pectoral muscle, and glands, and ulceration, to occur as early as four months, and to be postponed for several years. Glandular involvement, indeed, may show itself as early as the first month, or even before the primary tumour can be felt; and from the fact that the glands are buried in the fat of the axilla, thereby evading early detection, I believe that their invasion antedates that of the skin. Be this as it may, if you are about to operate in a case in which there is nodular infiltration of the skin, you should be prepared to open the axilla and search for infected glands, even if they cannot be distinguished from without. Finally, I desire to state that I am no believer in the constitutional origin of carcinoma, and that I am convinced that we will obtain good results after operations if we can only secure cases in which the disease is limited to the gland itself. Even when the skin over the breast is infiltrated to a slight degree, and the glands of the axilla are not too seriously involved, I believe that we may prolong life, if not obtain a radical cure, by extirpation. To do this, however, you must discard the operation as you usually see it performed, and remove the entire gland, with all its coverings, by a circular incision, dissect away the pectoral fascia, and clean out the axilla. In other words, do not aim to secure a covering for the wound, but practise thorough excision."

Professor Pasteur on Virulent Diseases.

In the *Gazette Hebdomadaire* for May 7, M. Lereboullet publishes an interesting review of Prof. Pasteur's recent researches on the disease vulgarly called chicken-cholera (*choléra des poules*), in its relation to the etiology of virulent disease. In its symptoms and the lesions it gives rise to it

resembles virulent diseases; and by the examination of the blood and tissues of the animals who have formed subjects of it Prof. Pasteur has shown that it is due to a microscopic organism. Pasteur has isolated this organism, which he says belongs to quite another group to that of the vibrios. This *microbe* he has cultivated in appropriate liquids, and has inoculated with it, so as to assure himself that it is really the virulent agent of the disease in question. Next he has been enabled so to modify and attenuate the activity of its properties and diminish its virulent power that it may be inoculated without causing death; so that, while it is morphologically identical with that which gives rise to chicken-cholera, it differs from this, inasmuch as it only determines transitory effects, which are almost always curable. More than this, its inoculation preserves from the virulent affection, so that a new inoculation, practised with a liquid containing *microbes* of the most active virulence, remains entirely powerless.

"I take eighty fowls which have never suffered from chicken-cholera," says M. Pasteur, "and inoculate twenty of them with very virulent virus, and they all die. From the sixty which remain I take another twenty, and inoculate them by a single puncture with the most attenuated virus I can procure. None of them die. But are they protected ['vaccinated' is the word he uses] from the virulent virus? Yes; but only a certain number of them: for, in fact, if I inoculate these twenty fowls with the most virulent virus, six or eight, although they become ill, will not die—contrary to what happened to the first twenty fowls, the whole of which died. Again, twenty fowls which have never had chicken-cholera are taken and are inoculated with the diluted virus by two punctures, made at an interval of seven or eight days. Are these protected from the action of the highly virulent virus? On re-inoculating them with this latter, we do not find that only six or eight, as in the former experiment, escape death, but twelve or fifteen. Finally, if I take another twenty of the original lot of fowls, and inoculate them successively with the attenuated virus—not once, but three or four times—no malady and no mortality will follow inoculation with the highly virulent virus. In this latter case the animals have been brought into the same condition as those which do not contract the chicken-cholera."

Every practitioner, M. Lereboullet observes, will at once comprehend the importance of these results; and the comparison established between variola and vaccinia on the one hand, and the virus which induces the cholera and the attenuated virus on the other, is illustrated in all the experiments. In a purely practical point of view another point deserves attention. Everyone is aware how difficult it is to fix the duration of vaccinal immunity, and to determine its value according to the number of inoculations and individual conditions. But in this exclusively parasitical disease identical facts are signalised; and just as we may see individuals recently but imperfectly vaccinated undergo attacks of small-pox, we find that repeated inoculations will preserve from chicken-cholera when a single inoculation will not do so. "It must therefore be recommended to practitioners not to content themselves with incomplete vaccination; and at this time especially, when vaccine-lymph is often so poor in active elements, they should try to obtain positive immunity by revaccinating, when the first vaccination has seemed insufficient, with lymph taken from the pustules already produced."

Prof. Pasteur read a paper also at the Académie de Médecine (*Bulletin de l'Académie*, May 4) "On the Extension of the Germ Theory to the Etiology of some Common Diseases," in which he states that last year, always dwelling upon the idea of the immense part which microscopical organisms play in nature, he took the opportunity of examining the contents of some furuncles in different persons. He removed some of the contents and placed it in fluids which had been found suited to the culture of microscopical organisms, and there was soon produced a peculiar microscopical parasite of spherical form. When rabbits and guinea-pigs were inoculated with some of this fluid, small abscesses were produced which were soon healed. As long as they existed, however, the microscopic organisms which had given rise to them could always be found in the pus. In a case of *osteo-myelitis*, also, M. Pasteur found in the pus a large number of organisms like those found in furuncles, so that he regarded the case which he examined as an example of furunculus of the medulla of the bone. In cases of *puerperal fever* the lochia were found to contain microscopic organisms of various forms.

"Under the expression 'puerperal fever,'" Prof. Pasteur observes, "are ranged very various diseases; but all appear to be the consequence of the development of common organisms, which by their presence infect the pus naturally formed at the surface of the wounded parts, and which from thence spread under one form or another, either by the channel of the blood or the lymphatics, determining, in different parts of the body, morbid forms varying with the conditions of those parts, the nature of the parasites, and the general constitution of the patients. Whatever this constitution may be, it would seem that a cure ought to be effected in all cases by opposing the production of these parasitic organisms. The antiseptic method seems to be, in the great majority of cases, the sovereign remedy, its application commencing immediately after delivery."

As an antiseptic, Prof. Pasteur strongly recommends a 4 per cent. solution of boric acid, this, used in a tepid state, being as efficacious and far less offensive than carbolic acid.

GENERAL CORRESPONDENCE.

THE ROYAL COLLEGE OF SURGEONS.

[To the Editor of the Medical Times and Gazette.]

SIR,—I understand that a resolution has been passed by the Council of the Royal College of Surgeons, that in future there is to be an extra examination on elementary anatomy and physiology at the end of the student's first year. Surely they must be stultifying themselves. By existing regulations candidates for the diploma of M.R.C.S. must attend *one* course of lectures on physiology, and *one* course of not less than thirty meetings in practical physiology. Are then we unfortunates to be condemned to instruct—if such a word could be used—first year's men in all the physiology they are to acquire; or is this a plan for making students revert to the old system of trying to understand physiology whilst they know nothing of anatomy?

Pardon me if I ask the question, What is understood by "elementary anatomy" and "elementary physiology"? Are we to go back to the days of "Brooke's Minutiæ"?

I am, &c., A TEACHER.

THE NEW SYDENHAM SOCIETY'S LEXICON.

LETTER FROM THE EDITORS.

[To the Editor of the Medical Times and Gazette.]

SIR,—In reference to your notices of the new Sydenham Society's Lexicon, we shall be glad to be allowed to state that in Part IV., which is now in the printers' hands, we have, from an anxious desire to meet the wish of the Council for its speedy issue, omitted botanical characters of most plants and drugs, all account of families of animals, and all notice of the treatment of diseases; and we have endeavoured so to compress the articles that, without attempting the impossible in a definition of a disease, our efforts at an exposition of a word may not extend over so large a space as formerly.

The objection that we have not produced a glossary of modern foreign medical and scientific terms, as in Littré and Robin, comes too soon; this is a question of index-making, which cannot be done till the work is complete.

As to the number of our sub-headings. In Dunglison's excellent dictionary, *Aristolochia* has twenty-two notices, *Arteria* and *Artery* 106; in Littré and Robin's great work, *Aqua* under the term *Eau* has 146 headings: we have a greater number; but this might perhaps, instead of being urged as a complaint, be taken as some evidence of honest work, for it is not within our duty to omit a word because its meaning is clear or because itself is useless,—sufficient that it has been used.

In regard to notices of eminent men, we purpose mentioning very shortly those with whose names some mode of treatment or some structure or some doctrine is connected, and we much regret that we should have credited the water-bed to Dr. James Arnott instead of to his brother.

As to the book being too big, let us set out a fact.

Mayne's Lexicon, in spite of its title, "Expository," contains a very bare account of each word; it was completed in 1860, and has till now not been re-issued. Dunglison's Dictionary, to which we are much indebted, is vastly fuller in its descriptions; it is in its third edition. Littré and Robin's large volume, which we have taken as our model, is much more extended in its notices, and it has reached its fourteenth edition. This is surely proof that the value of a dictionary is not to be measured by the scantiness of its contents.

In occasionally repeating a short explanation of similar words we have considered the convenience of reference rather than our own; nothing is more irritating than to find "see" so-and-so doing too frequent duty.

In the early pages of the book we have unfortunately to confess to some carelessness, and can only plead in excuse an insufficient recognition, at the commencement of our work, of the enormous labour and care required for its satisfactory performance—a mistake of which no one is so conscious as ourselves.

It is very far from our wish to complain of fault-finding; on the contrary, we welcome it, and we should be more than grateful to your reviewer, or your correspondent Mr. Chatto, if he will take ten or twelve pages of Mayne, beginning at D (for C is well on its way in manuscript already), correct it, add such new words and explanations as he may think fit, and then favour us with a perusal. It shall receive due recognition and use; it may well happen to be of great value in the future progress of the Lexicon; and it will be certain to afford its author, if our experience be any guide, a clearer knowledge of the toil and trouble of a dictionary maker. We are, &c., Henry Power.
Leonard W. Sedgwick.

THE CALCUTTA HOSPITALS.

("*Audi alteram partem.*")

[To the Editor of the Medical Times and Gazette.]

Sir,—In the interests of truth, and in justice alike to the Bengal Government and to the Committee on Medical Expenditure in Bengal, I trust you will allow me to say a few words on the subject of the recent controversy as to hospital management in Calcutta. I will do my best to avoid personalities and stick to facts. The profession generally must form its opinion on the merits of the case by such evidence as is put before it, and the views of yourself and the other medical journals will necessarily carry great weight. What your sources of information have been, I know not; but, judging from your endorsement of Dr. Irving's views in your issue of February 14, I am inclined to think that you are imperfectly acquainted with material points in the controversy, and have been led into allowing yourself to be retained for the defence instead of acting as judge.

It is, of course, natural that a medical journal should be prompt to protect medical men from unwarrantable interference with their professional freedom by unprofessional people, and that an editor should be largely guided in forming an opinion on the merits of a case like the present by the opinion of the medical men interested, more especially when such men as Drs. Chevers and Ewart are concerned. I think, however, that the members, and especially the medical members of Sir Ashley Eden's Committee, have a right to ask you not to accept one-sided statements, but to weigh impartially all the evidence of the case. Take Dr. Irving's letter for instance. As Surgeon-General of Bengal he had, one would think, ample opportunities of forming a sound opinion on the subject. It was clearly his duty to know all about the case, and it was perfectly natural that you should accept him as a skilled and impartial witness whose opinion was entitled to the fullest respect. Had you known that he had prejudged the case and refused to read the evidence you would have attached less importance to his communication. Yet this is what he has done. In a letter to the *Calcutta Englishman* published on March 9, and sent to you by this mail, he says: "Looking to the constitution of the Committee I know that there could not be a fair, impartial, and unprejudiced inquiry"; and he makes the astounding admission, "I never read their report." The Committee was composed of the Legal Remembrancer to Government, the Superintendent of Calcutta Lunatic Asylums, the Accountant-General, the Under-Secretary to Government, the Inspector-General of Gaols, the officiating Sanitary Commissioner, and the superintendents of the three great Calcutta hospitals. Their official positions show that they were all men of some mark and standing. I claim for them that they are all honourable gentlemen, and that neither Dr. Irving nor Dr. Ewart has any right—in default of more valid arguments—to accuse them of having prejudged the case, or of want of fairness or impartiality. The Government of Bengal, though it had undoubtedly formed an opinion that the management of some of the hospitals was needlessly extravagant, merely wanted the truth, had no wish to push economy to the detriment of the sick; and the Committee had no object but to ascertain the truth. For this purpose they made a most full and searching inquiry, and collected an immense mass of evidence (all of which was published) to show the grounds on which their conclusions were based. Whatever opinion may be formed of these conclusions, after a careful study of the report and the evidence, is of course entitled to respect; but I submit that the Committee are entitled to claim that any person who presumes to criticise their conclusions, yet boasts that he has prejudged the case, and has not read the evidence, should, on his own admission, be put out of court; and this Dr. Irving has done *coram populo*.

The key-note of the Committee's report is found in their first resolution, which surely commends itself to common sense—"That the principle which ought to govern the management of a hospital supported from public funds is the greatest possible economy consistent with the liberal provision of all things necessary to the well-being and comfort of the sick"; a principle which has been unreservedly accepted by Government. The "general impression of most of the medical men of Calcutta, that the all-important part of hospital management, in the estimation of Government, was rigid economy," alluded to by Dr. Irving in his letter to the *Englishman*, was a wrong impression. The impression did no doubt exist, and was alluded to by the Committee as having made some medical officers "unduly economical." The hospitals were at that time being worked at a much lower limit than that recommended by the Committee, who gave it as their opinion that the rates then being paid would rise, and expressly pointed out that "the economy contemplated was to be exercised against waste, not against any reasonable requirements of the sick." Yet the statement is persistently repeated that Government has deliberately sacrificed the interests of the sick for the sake of economy.

The facts elicited by the inquiry led the Committee to the following conclusions, the evidence for (and against) which is given in their report and its appendices. In the Medical College Hospital they found no irregularities of any importance, but they found a system in force which was so cumbrous and difficult to work that Dr. Chevers says of it that it drove his colleagues to the verge of mutiny. They found that under a system by which the medical officers signed their diet-sheets at the end—sometimes weeks after the end—of the month, the ordering of diets and extras had been left largely in the hands of the native house-physicians and surgeons, and that extras were so lavishly ordered that in many cases the diets were mere adjuncts to the extras, instead of the extras to the diets. They found, for instance, that during a given period diets had cost Rs. 3900 and extras Rs. 5200; and that in an enormous number of instances the amount of food ordered on the diet-sheets was far in excess of any possible requirements of the patients, and they gave specimen diet-sheets in support of their opinion. The Committee showed that this vicious system had grown up piecemeal, and that every part of it had been duly sanctioned by Government. They explained that neither the hospital staff nor the local authorities meant to encourage waste, but they showed that, as a matter of fact, great waste had occurred, and had been practically unavoidable under the circumstances. With the one object of preventing waste in future, they recommended a new system, which, *as a system*, is admitted by all the present medical officers to be a great improvement on the old one, as it shows each officer daily the actual cost of his diet on the previous day. They also recommended a reduction of the maximum limit for diet-money, which had been so liberal that in spite of waste it had never been reached. The new limit which they fixed on was 25 per cent. more than the actual cost of dieting patients at the time, and it had never been exceeded before 1870, when the rates objected to by the Committee were forced on the then Principal, Dr. Chevers, in spite of his deliberately expressed opinion that "there is not a patient in hospital who does not receive in full all that can

conduce to his recovery." The rates fixed by the Committee exceeded those found to suffice in those Calcutta hospitals which were dependent on voluntary contributions, and had not the Fortunatus's purse of Government to fall back upon. It was not a question of opinion, but of experience and fact. These showed that the rates were more than sufficient, and would have justified a lower limit, but the Committee recognised that the existence of a large medical school attached to a hospital "would probably always lead to some increase of expenditure," and they therefore fixed on a higher limit than they otherwise might have done.

The old diet-scales were admittedly defective. New ones were prescribed, and are given in the report. They are more liberal than those of any London hospital known to the Committee, and were admitted to be so by every member of the hospital staff. Express power to alter the scales was, however, given, and, subject to the maximum limit *as an average*, the power of the medical officers to order whatever they liked in the way of diet, extras, and stimulants was left absolutely untouched, although the Committee expressed an opinion that, in the great majority of cases, rum answers every purpose as a stimulant for native patients. Provision was also made to allow of the maximum rate being exceeded in special cases.

So far as the Medical College Hospital was concerned, the Committee made no single remark implying blame to the hospital authorities. They rather went out of their way to explain and justify the past expenditure, but they found, as a matter of fact, that there had been waste, and that the waste was unavoidable under the system in vogue.

In the case of the General Hospital, however, they found themselves obliged to admit that "the management had been characterised by great laxity, and that grave irregularities had resulted therefrom." They added, however, that "much waste and extravagance must be ascribed to a system (the hospital authorities were not responsible for the system) which sanctions maximum charges without making any provision to secure economy." The reasons on which they founded their conclusions were briefly as follows:—The cost of diet, extras, and stimulants had been considerably in excess of the College Hospital rates, wasteful as the Committee considered these to have been. The cost of medicines and instruments had risen from Rs. 26 per patient per annum in 1869, to Rs. 97 per patient in 1874. Part of this increase the Committee admitted to have been due to higher prices, unfavourable rates of exchange, and improved modes of treatment. They found, however, that the indents had been systematically falsified, and that large quantities of stores declared to have been expended had not really been so, but remained in stock or had disappeared. Take blistering plaster as an instance. The Medical College Hospital, with an average attendance of 563 patients, had used 40 lbs. in the five years reviewed by the Committee. The General Hospital, with 251 patients, would have used 18 lbs. at the same rate. The quantity declared on honour to have been expended was 330 lbs.! No difference in the prescribing idiosyncrasies of different officers could account for this. A long list of excess medicines is given in the report, and the following example was cited as an illustration of the way in which the indents were falsified:—

"In the indent for 1874-75, 2 lbs. of squill vinegar were shown as remaining from 1872-73, 30 lbs. as received in 1873-74, making a total of 32 lbs. Of this, 30 lbs. were returned as expended during the year 1873-74, and 40 lbs. were indented for as required in 1874-75. This was passed by the Deputy Surgeon-General, and next year's account stood as follows:—2 lbs. + 40 lbs. = 42 lbs. Of this only 10 lbs. were declared to have been expended, leaving 32 lbs. at the end of the year, *i.e.*, on the 31st of May, 1875. If this statement was true, only four ounces of this drug have been used in the last three years, for there are 31 lbs. 12 ozs. in store now, although 30 lbs. and 10 lbs. were expended, or declared to have been so, in the two years preceding 1st June, 1875. No fresh supply was asked for in the indent for 1875-76, the year beginning with 32 lbs. in hand. But at the end of the year, although the 32 lbs. remained untouched, 17 lbs. were written off as expended, 15 lbs. were shown as remaining, and 5 lbs. more were asked for, but were disallowed by the Deputy Surgeon-General. Next year again there was no expenditure; the stock was 15 lbs.; 5 lbs. were written off, and a remainder of 10 lbs. shown. Another year has passed; the facts were discovered in October last. Efforts have been made to utilise the medicines, and the 32 lbs. of three years ago are 31 lbs. 12 ozs. still. As no fresh supplies have been received since 1875, there must have been more than 32 lbs. remaining at that time."

Dr. Ewart remarks, in connexion with this point, that "had stock-taking been done systematically by the responsible officer, according to regulations, tho irregularities pointed out by the Committee could never have occurred or passed without notice,"—which is precisely the contention of the Committee; and that stock was not taken, and these irregularities consequently allowed to occur, shows the general "laxity" of which they complain. Dr. Ewart was not required to take stock himself, but, as General Superintendent, he had to see that it was done. He also endeavours to get over the facts by suggesting that "the medicines may have been condemned in good faith as unfit for use." There is, however, no record of their having been condemned, and as a matter of fact the great bulk of them were seen to be perfectly good by several members of the Committee. I will say nothing of his unworthy insinuation that the present Superintendent of the Hospital deliberately used drugs which he knew to be bad, for the sake of economy.

By the rules of the Hospital, a certain number of small rooms are reserved for paying patients, and the Calcutta Port Fund pays a rupee a day for each seaman. It was Dr. Ewart's duty, as Superintendent, to see that these dues were collected. The resident medical officers gave evidence that there has been no recent increase in the number of patients occupying the private rooms. All such patients ought to have paid. Yet, while last year there was a daily average of eight such patients, the receipts in Dr. Ewart's time had never represented one such as constantly present. The books have disappeared under suspicious circumstances, and the conclusion is unavoidable either that the money was collected and embezzled, or that the rules of Government were disregarded. It is in evidence that the wife of a teacher in a Government college on a salary of Rs. 400 a month was kept at Government expense for three months prior to her confinement. Dr. Ewart says that under the "benevolent governments" of his time the fees were not enforced, but the Committee persist in thinking that such cases were a distinct abuse of charity and were never intended to be allowed. The Committee found also that a sum of upwards of a lakh and a half of rupees (some £15,000 sterling) had not been collected for the board of sick seamen—a point which Dr. Ewart in his letter has found it convenient to ignore. They found also that an enormous quantity of clothing had disappeared—no less than 1269 articles, including 483 sheets—from which they concluded that, as in the case of the medicines, the process of stock-taking had been imperfectly enforced.

The above facts, which might admit of explanation, but which as facts cannot be denied, led the Committee to conclude that the administration had been lax, and that far too much trust had been reposed in subordinates and servants. They considered that Dr. Ewart had been deceived, but they nowhere imputed blame to him, and for my own part I do not think that any great amount of blame was due to him. Had he suspected that the irregularities mentioned were going on he would have put a stop to them. No raising of side issues will get over the facts that indents were falsified, medicines wasted, clothes lost, and dues left uncollected. The system was rotten, but Dr. Ewart was not responsible for the system: he believed in his subordinates, and was deceived. Had he, when they were pointed out to him, frankly admitted the irregularities or maintained a discreet silence there would have been no more to be said. The main object of the Committee's recommendations was to prevent their recurrence. Dr. Ewart, however, will admit nothing of the kind. He tries to explain away proved facts, and accuses Government of having sacrificed the interests of the patients to its desire for economy. He states that while under his management, under a system of open contract, "good and wholesome meat, fowls, eggs, bread, butter, milk, wines, etc.," were freely supplied, the new "lowest tender" system gives "cheap provisions of inferior quality"; and that "parsimony—excessive parsimony—is practised at the cost of tho happiness, contentment, and well-being of the sick." His contention is based on some evidence by Dr. Jones, which the recent experience of that officer has considerably modified, but which, if expressing the fact, would apply equally to Dr. Ewart's time. There has been no change in the system of supply: the same contractor provides the food, and the rates paid are the same or higher than in Dr. Ewart's time. The now rates have been in force for

two years, and, in the almost unanimous opinion of the present Hospital staff, are quite sufficient. Several of them go so far as to say that the patients are as well or better fed than they ever were before. The Ladies' Committee and the seamen in the port bear the same testimony, and the health officer of Calcutta, himself on the staff of the College Hospital, shows not only that the meat supplied is of excellent quality, but that the Hospital pays as much for it as the Peninsular and Oriental Company does to supply its first-class passengers. Much has been made of the phrase "second-class meat." It is to a great extent a technical term in the Calcutta market. No London hospital gets sirloins and saddles at retail prices from a fashionable West-end butcher; yet this is, in effect, the mode of supply recommended in some quarters for the Calcutta hospitals. In a year of exceptionally high prices the Superintendent of the General Hospital has had a margin of over Rs. 5000 on the Committee's rates, and the net gain to Government in the General Hospital alone was upwards of Rs. 80,000 in 1878. In the face of the evidence just published by Government, this fact alone proves the soundness of the views taken by the Committee. The new system has worked, and is working, extremely well, and, although the cases have been more severe on the average, through the exclusion of trivial cases, the death-rate is lower than ever. The reason of this is that all the details of management are now carefully supervised by the responsible authorities; the patients are better cared for, but there is no waste. The opponents of the reforms, or rather those who consider their own management reflected on by the introduction of the reforms, can only get over the facts by implying unworthy motives not only to the Government and to the Committee, but to the hospital authorities engaged in working the new system—a mode of argument which shows that they are dissatisfied with the system, but fails to show that it is not sound.

The rates fixed by the Committee were, as I have said, based on experience. Had further experience shown them to be insufficient they would have been raised, but the all-but unanimous verdict of the medical officers who work them is that they are quite sufficient. Dr. Smith, indeed, considers that eight annas is too low for European patients, and asks for ten annas—a somewhat illogical conclusion from the fact that his diets cost last year some 20 per cent. less than the rates sanctioned by the Committee, so that he had at all times a large margin for any additional expenditure which he might have considered necessary.

Nothing was further from the intention of the Committee than to attack or throw blame upon individuals, and I am sure that every member of it deeply regrets the unfortunately personal tone which the discussion has taken. The work was naturally invidious and disagreeable, but duty is duty clear of consequences, and they simply did their duty without fear or favour, trying, to the best of their ability, to

"Nothing extenuate,
Or set down aught in malice."

I must apologise for the length to which these remarks have gone, but it seems to me that facts are being lost sight of in the heat of controversy, and that a much-needed and most successful reform is being assailed on irrelevant issues, the facts of the case being ignored or misrepresented. I enclose my card; but having no wish to have personal misunderstandings with men whom I respect, though I differ from them, shall be content to sign myself

A Member of the Committee.

New York Medical Night Service.—A Bill for the establishment of a medical night service, framed on the one which is at work in Paris, has been introduced into the New York Medical Legislature. It provides for the registration of a list of physicians, approved of by the Board of Health, who are willing to attend a night-call for the fee of $3. This sum is to be paid by the patient or by the Board of Health on receiving an authenticated certificate of attendance. When necessary, consultations may be held at the rate of $6 each. Patients may choose any of the registered practices on the list, but as a rule the nearest one is to be summoned. The service is intended only for those who have no regular medical attendant, who are strangers in the city, and who require immediate attendance. The sum of $3000 is asked for as an appropriation for the effective working of the scheme.—*New York Med. Record*, April 24.

REPORTS OF SOCIETIES.

EPIDEMIOLOGICAL SOCIETY.

Thursday, April 29.

Sir Joseph Fayrer, K.C.S.I., M.D., F.R.S., President, in the Chair.

Fevers in India.

Surgeon-General C. A. Gordon read a paper on "Certain Views regarding Fevers in India." He began by observing that the views he was about to express were those held by eminent authorities,—that only the deductions from a comparison of those views were his. He alluded to what he considered to be a description by ancient Hindoo writers of what in recent times is in India called synonymously typhoid or enteric fever. He enumerated several standards or definitions of what was, by different observers, held to constitute the disease so-called, and noticed that such standards differ among themselves. He noticed that the use synonymously of the terms "typhoid" and "enteric" has led to much confusion in description, and to the grouping together of conditions and complications which have no necessary connexion with each other; that the term "typhoid" in former times was used to denote a condition, that of "enteric" a complication, but neither as pointing to a specific form of fever the result of a specific cause—namely, filth in air, food, or water. With regard to age, he noticed the circumstance that not alone specific enteric fever is particularly fatal among the young, but so also are other forms of fever, and other diseases. Also that cases of enteric fever are recorded as recurring in persons of advanced age, and in whom the presence of Peyer's glands has long ceased to exist. Early residence in India, and youth, are usually coincident in the same individual. All young persons going from a temperate to a tropical or semi-tropical climate must undergo a process to which the term seasoning used to be applied in the West Indies, and on the West Coast of Africa, when this process occurs violently it is by an attack of fever, in the course of which low adynamic or typhoid symptoms may occur, as also various complications—cerebral, pulmonic, hepatic, intestinal or enteric, and so on. When the process takes place gradually it is by a period of more or less impaired health, but without actual "cataclysm." But not alone is one form of fever especially fatal among new arrivals; so are all endemic forms of disease, and in a ratio little different from so-called typhoid or enteric fever. The author enumerated the symptoms by which specific typhoid or enteric fever is said to be characterised, and, in reference to them, observed that while in their entirety they had never been recorded in any one case of the disease so called, one or more were present in other forms of fever and of other diseases; instancing among such, tympanites, diarrhœa, abdominal tenderness, hæmorrhages, and so on. With regard to cutaneous eruption, it was not always present in all cases of typhoid occurring in Europe; in India, cutaneous eruptions, papular in character, were of frequent occurrence during the hot and damp seasons in all forms of fever, in various other forms of disease, and also in the absence of any disease at all. He gave a series of statistical observations, the result of which indicated that in the cases to which they referred no communication whatever existed between the presence or absence of a cutaneous eruption and the presence or absence of ulceration of Peyer's glands; also that various kinds of eruptions were noted in connexion with cases said to have been of enteric fever. Temperature charts show no uniformity among themselves, either as respects those given as typical in typhoid fever as it is said to occur in Europe, or in those appended to reports of individual cases so designated in India: hence such charts are untrustworthy in diagnosis. The causation of the disease is variously given by different observers; that by pythogenic influences, by late reports, is considered as not always effective, and not necessary to give rise to specific fever, but to be productive of other forms of illness. Moreover, as a train of phenomena and pathological conditions precisely similar to those that may under certain circumstances arise from filth causes, are also produced by fatigue, exposure, and other non-specific causes, the applica-

tion to them of a name signifying one kind of causation only, and it specific in its nature, is inappropriate and misleading. As a matter of fact, no case related in reports before the meeting had been actually traced to pythogemic causation. On the subject of season in relation to enteric fever, the opinion of certain writers was quoted, that in Britain typhoid or enteric fever had taken the place of what during last century was called autumnal fever, if indeed it was not the same disease. In India ardent fevers prevail during the hot, dry period of the year, those with intestinal complications during the rainy and moist season. Climate also exerts a modifying influence upon disease as upon the fauna and flora of particular countries; in India certain organs manifest a special liability to infarction as a result of such influences, and among them the liver and the aggregated glands of the ileum. The pathological appearances said to be distinctive of enteric fever are not invariably recorded in fatal cases of the form of fever so designated; similar appearances are recorded in connexion with other diseases, more especially dysentery, yellow fever, and in protracted cholera. In malarial fevers they have been observed to an extent greater than in specific enteric or typhoid fever, and also as results of certain poisons. The views expressed in regard to his reports on the table were next referred to by the author, with the result that those views differed among themselves. In summarising the whole he indicated that with regard not only to the forms of fever so designated in India, but also with regard to that observed in Europe, views are expressed of a nature absolutely different from each other, while in regard to not one circumstance in connexion with etiology, phenomena, or pathology are opinions in accord. He therefore expressed a hope that good might result from the discussion to follow his paper, not only in a professional point of view, but also to the soldier in India.

Dr. A. P. Stewart observed that there was a singular want of uniformity among Indian observers, and compared the opinions which prevail there to those which existed in England before cases were studied in detail.

Dr. Ewart took exception to many statements of the author, especially to the argument against filth producing typhoid fever, for the filthy condition of all the villages in Madras was well known.

Dr. Norman Chevers preferred the term "enteric" to "typhoid" fever. He also referred to the author's disbelief in enterie fever because the fevers he had met with varied in type applied to all the fevers. He denied the absence of pythogenic conditions in India.

The President agreed to a great extent with Dr. Gordon, but the same enteric fever found in England also existed in India, though many cases of what appears to be enteric fever also exist which are not due to so-called drain conditions.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.

Monday, May 3.

Mr. A. Woodhouse, President, in the Chair.

Some interesting specimens of abnormal dentition were exhibited by Messrs. F. Canton, Tod (of Brighton), G. H Harding, and Crapper (of Hanley). Mr. Crapper also sent a lower denture encrusted with a large mass of salivary calculus. It had been worn for five years without removal from the mouth. Mr. S. J. Hutchinson showed a similar plate which had been worn continuously for four years; and Mr. Vanderpant (of Kingston) brought forward a third specimen.

Mr. G. H. Harding described his method of dealing with gutta-percha fillings; and Mr. Moon showed a regulation plate made by Mr. Williams, of Leamington.

Nerve-stretching in Neuralgia.

Mr. A. S. Underwood read this paper. Neuralgia was of course only a sympton of nerve-irritation, which might be set up by many different causes, and might vary greatly in degree, from a simple case which could be cured by the extraction of a tooth, or by the administration of some simple remedy, up to the terrible form which Trousseau had called "epileptiform," and of which he said that, after thirty-six years of practice, he had never known a case to be radically cured. Until the treatment by stretching was accidentally discovered in 1869 by Nussbaum, the only remedy for these severe cases consisted in division of the affected nerve, an operation which afforded too often only temporary relief, since the morbid condition remained unaltered, ready to re-assert its power as soon as the nerve had reunited. The author then related three typical cases of "epileptiform neuralgia." In the first drugs only had been tried—ineffectually; in the second, division of nerves gave temporary relief, but after thirty years of intermitting suffering the patient's face was scarred all over by the surgical operations he had undergone. In the third case nerve-stretching at once effected a permanent cure. He had found thirty-nine cases of nerve-stretching recorded during the last three years in various papers and pamphlets. In thirty-two of these the operation effected a complete and permanent cure; two other patients were relieved of pain, but died from accidental causes; whilst in the remaining five cases the operation was performed for tetanus. In no case, so far as Mr. Underwood could ascertain, had any harm resulted from the operation. They were all cases of severe neuralgia in which various plans of treatment had been previously tried without benefit. From these results there could be no doubt that nerve-stretching was entitled to rank very high as a last resource in those cases of obstinate neuralgia in which all reputed drugs had failed, and life had become a burden to the sufferer.

A discussion followed, in which Messrs. Coleman, Charles Tomes, Sewill, English, Blanvelt, and Hutchinson took part.

In his reply, Mr. Underwood pointed out that the stretching must be performed boldly, and that even such nerves as the small branches of the facial would bear a very considerable amount of pulling without fear of rupture. The operation would sometimes do good, even though the apparent seat of the pain might be situated higher up the nerve than the point at which it could be stretched. The loss of sensation, and sometimes also of motion, which followed the section of nerves was always a source of inconvenience to the patient. He thought, therefore, that neurotomy should only be performed in the small residue of cases in which the stretching operation failed to give relief.

The meeting terminated with the usual vote of thanks.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, May 5.

W. S. Playfair, M.D., F.R.C.P., President, in the Chair.

Encephalocele.

Dr. Godson showed photographs and a cast of the head of an infant the subject of a large encephalocele. Nearly half of the brain was contained in a sac outside the cranium, a very narrow peduncle, passing through the anterior fontanelle, connecting it with the portion within the skull. The head with the tumour resembled an hour-glass. The child lived a month and had never cried. She had no convulsions till just before death.

On Recording the Fœtal Movements by Means of a Gastrograph.

Dr. Braxton Hicks read this paper. The author called attention to two notes published in the *Proceedings of the Royal Society* for March, 1879, entitled, "On the Auxiliary Forces concerned in the Circulation of the Pregnant Uterus in Woman," and "Note on the Supplementary Forces concerned in the Circulation of the Abdomen in Man." In the present paper tracings were brought forward taken from the abdomen by means of an instrument like a cardiograph and a polygraphic cylinder. Fœtal movements of two sorts were shown—1. Sudden kicks, shown by sharp marks indistinguishable from movements of the maternal limbs; 2. Slow turning about in utero, shown by a gradual elevation of the line of wave for some distance. Both kinds of marks were superposed upon the respiratory waves.

Remarks were made by Dr. Edis, Dr. J. Williams, and Dr. R. Barnes; and Dr. Hicks replied.

Case of Extra-uterine Fœtation about the Seventh Month of Pregnancy—Sudden Urgent Symptoms—Removal of Fœtus by Abdominal Section—Death.

Dr. Braxton Hicks narrated this case. The patient, aged twenty-nine, married ten years, had had two children,

one seven years, the other four years since; no miscarriages. In April, 1879, she was taken with severe vomiting and abdominal pain, for which she was kept in bed a month. After getting up, she said that her womb came down. In July she was admitted into Guy's Hospital under Dr. Galabin, and then thought herself about six months pregnant. Only the fact of pregnancy, together with a swelling behind the cervix, was then made out, and she shortly left the hospital. In the first week of August she was re-admitted under the author, in the absence of his colleague. A tense enlargement then extended on the right side, three inches from the middle line, up as high as the umbilicus, whence it rose nearly to the left ribs, towards the flank, and extended downwards, filling the whole left hypogastric region. This evidently contained a living fœtus. A so-called "placental bruit" was heard over the centre of the abdomen, below the umbilicus. The cervix protruded through the vulva, the external os being patulous, so that the finger could reach the internal os, which was closed. The sound could not be carried into the uterus beyond the unimpregnated length. For greater assurance he had a sponge-tent introduced into the uterus, but nothing was found within but some fragments of decidua. At the end of a week she was suddenly taken with increased pain and distension of lower abdomen, shortly followed by collapse and pallor, pulse rising to 140, thready, temperature normal. She said that, while sitting by the side of the bed, she felt something give way in her lower abdomen, upon which the fœtus kicked violently, and then she became faint, and shortly after the movements ceased entirely. Three hours later the author found her in great distress from the tension, saw that evidently blood had been effused internally, and decided to operate, as the only chance for her life. This was done under carbolic spray, the incision being made in the median line, which had now become the most prominent part. A cavity was opened, containing a large quantity of dark, watery blood, which had evidently been effused within the placental area, and had been the cause of the symptoms. After its escape, the chorion was ruptured, and the lifeless fœtus, about the size of a large six-months normal fœtus, extracted. Not much more blood flowed, and the wound was closed except an opening an inch and a half long. The patient, however, began to show signs of sinking, and died shortly after. At the autopsy it was found that the placenta extended up the abdominal wall in front almost to the umbilicus, and was not attached to uterus or bladder. The sac was adherent in all directions to intestines and other parts. Its lowest portion was attached in front of the uterus and behind the bladder. On the anterior surface of the uterus was a pedunculated fibroid as large as a walnut. The right Fallopian tube, firmly bound by adhesions, crossed the anterior surface of the uterus, and was attached to the lower surface of the fibroid, terminating in some loose tissue under the placenta. The right ovary was adherent to the right side of the amnial sac, and contained a large corpus luteum. The author remarked—(1) that the case was the analogue of concealed accidental hæmorrhage in normal pregnancy; (2) that it was a clear case of true ventral pregnancy; and (3) he asked the opinion of the Society how the hæmorrhage should be stopped if the operation were performed during active fœtal life, and the placenta found situated as in this instance. He thought that carbolised sutures might be kept within for a time, and a compress maintained, since rigid antiseptic treatment would be impossible.

Dr. Wiltshire thought that there was no doubt that abdominal pregnancy did occur, and instanced a case of Koeberle's in which, after ablation of an inverted uterus, pregnancy ensued by means of a fistulous opening at the top of the vagina; also one in which the roof of the vagina was ruptured by forcible coitus. He thought that, in the present case, as an exception to the general rule, it might have been preferable to remove the placenta.

Dr. Routh thought that, if the position of the placenta had been made out by auscultation, the incision might have been made away from the median line, and wounding the placenta avoided. He also asked why Dr. Hicks did not, in preference to performing gastrotomy at all, aspirate the sac, or kill the fœtus by injecting morphia into the amnial cavity. The separation of the placenta seemed to have been caused by the fœtal movements.

Dr. Gervis mentioned a case in which he had performed primary gastrotomy for extra-uterine fœtation. Not much difficulty was met with, and but trifling hæmorrhage, the position of the placenta being mostly in the pelvis; but the patient died in about three days, as the result of a continuous hæmorrhagic loss through the drainage-tube. The autopsy showed no sign of peritonitis, but separation of the placental margins. Could any treatment diminish this danger?

The President was surprised to hear Dr. Hicks say that perfect antiseptic treatment was impossible, and thought that the chief hope of progress in such cases lay in carrying it out completely, however difficult that might be.

Dr. J. Williams thought that the insertion of a tent into the cervix was superfluous for diagnosis, and that it possibly had something to do with the sudden accession of severe symptoms.

Dr. Edis called attention to the monograph of the late Dr. Parry of Philadelphia, who was led by his statistics to condemn the puncture of the cyst, and to recommend either removing the fœtus entire or allowing the cyst to remain uninjured.

Dr. Barnes was inclined to think that the present might be reckoned among a few exceptional cases in which removal of the placenta might be justifiable, the hæmorrhage being afterwards stopped by compressing the abdominal walls together.

Dr. Braxton Hicks said that most of the speakers had mistaken the state of the case. Urgent symptoms suddenly came on while he was waiting for a short time to consider the best line of treatment. The tension was then so great as to obliterate the previous outline, but he did not think that the position of a *souffle* would always absolutely determine the site of the placenta. He differed from Dr. Routh, and regarded the violent saltation of the fœtus as evidence of its impending death from asphyxia. No great amount of recent blood was lost during the operation, but the question he had asked was: What should be the treatment if the placenta were cut, the fœtus being still alive? He could not agree with Dr. Barnes, that the placenta might be removed without too great risk of hæmorrhage. In answer to the President, he thought that it would be extremely difficult to carry out the antiseptic treatment perfectly, though it might be possible under advantageous circumstances.

Two Cases of Extra-uterine Fœtation.

Dr. G. F. Fulcher contributed this paper. On July 10, 1872, the author was called to the wife of a cottager, who was suffering from intense abdominal pain, and showed signs of violent internal hæmorrhage. There was no vaginal discharge, uterus moderately enlarged, fundus tilted backward. Extra-uterine fœtation, with rupture of sac, was diagnosed, and the patient died in a few hours. At the autopsy a fœtus of about five months was found in the abdomen, together with a detached placenta, whose attachment had been parietal. Both tubes were intact. The final attack came on while the patient was drawing water from a well. There had been frequent uterine hæmorrhage previously. She was thirty-two years old, and this was her third pregnancy. Case 2: A woman, thirty-two years old, pregnant for the second time, was expecting her confinement in November or December, 1879. On December 6, the author was summoned on account of paroxysmal pain with sickness. He found the uterus only moderately enlarged, retroverted, os pointing forwards and upwards towards the symphysis. The fœtal heart was heard over right side of abdomen. Next day, in consultation with Dr. J. B. Maurice, the uterus was ascertained to be empty. It was decided to remove the patient into the Savernake Hospital, there to perform gastrotomy, but some inevitable delay occurred. Reference was also made to an eminent authority in town, who said that it was better, *cæteris paribus*, to wait until the death of the fœtus, and then quietly to operate. The fœtal heart was heard up to the 12th, and movement continued until the 14th. She was removed on the 16th, at which time the violent paroxysmal pains had ceased. On December 18, peritonitis having set in, the operative measures were abandoned, and she died on the 26th. The autopsy revealed a large child, weighing nine pounds and a half; placenta attached over left iliac fossa, broad ligament, and abdominal wall up to linea alba. The cavity contained grumous fœtid fluid.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, MAY 11.

JOHN E. ERICHSEN, F.R.C.S., F.R.S., President, in the Chair.

A THIRD CASE OF EXTRA-UTERINE GESTATION TREATED BY ABDOMINAL SECTION.

MR. LAWSON TAIT read this case, and said that it differed from the two previously read before the Society in that the operation was performed before the death of the child, whose life was saved, but the mother succumbed to the operation. Mrs. S., aged thirty-three, had been married fourteen years, and had had six children. Since her last menstruation in May, 1879, she had been in constant pain, of which a severe attack occurred in July. In October she became satisfied she was pregnant, and Mr. Lattey, suspecting the nature of the case, asked Mr. Tait to see her. A large abdominal swelling was evidently a pregnancy, and to the left of the umbilicus was a prominent mass which from its rhythmic contraction was clearly the uterus and was attached to the larger mass behind it. The head of the child was detected between the rectum and vagina. The pain becoming agonising, and being unrelieved by opiates, an operation was determined on. Ether was administered on the morning of January 31, and on making the median incision the empty uterus was found, and the cyst, which was the right broad ligament, was opened and the child removed without difficulty; the edges of the opening in the cyst being then secured to those of the parietal wound, leaving an opening for the discharge of the placenta, and the peritoneal cavity was closed. The child was at first profoundly narcotised, but is now, three weeks after, thriving and well. The death of the mother, which occurred on the fourth day, seemed to be from protracted shock. At the post-mortem there were found some morbid appearances in the liver, and ante-mortem clots in the heart, but no peritonitis. The cyst proved to be the broad ligament, as diagnosed, and there was a deciduous lining in the uterus in process of separation. The Fallopian tube had been ruptured at its lower aspect, the ovum thus escaping into the tissue of the broad ligament, and the case confirmed the author's opinion that all extra-uterine pregnancies are originally tubal, that the tube bursts in between eight and twelve weeks, and where not fatal an extra-uterine pregnancy is completed. The unfavourable result to the mother was due to the delay in the operation, but the case is of interest from the saving of the child. The child might have been removed by vaginal section, but large venous sinuses in every direction made it likely that any injury to one of them would be fatal, and in vaginal section it is impossible to see what to avoid.

MR. ALBAN DORAN had examined the post-mortem appearances in three of these cases, and it seemed to him that the operation per vaginam was a very dangerous one. In these the displacement of the bowels downwards was so great that there might be great risk of fatal injury.

MR. SPENCER WELLS did not think that an extra-uterine pregnancy must of necessity be associated with rupture of the Fallopian tubes. In one case he had seen, it certainly was not. Then there was both a uterine and extra-uterine fœtation.

DR. JOHN HARLEY said that the old notion was to leave alone such cases until nearly the full term, and then to operate by some form of Cæsarian section. His opinion was that it should be done as early as possible. A patient came to him at St. Thomas's Hospital, complaining of a small and painful tumour in the groin. This grew rapidly and was thought to be malignant, but closer examination showed that it was fœtal. She was transferred to the care of the obstetrical division, but for various reasons any operation was deferred until late in the history of the case. The child was removed alive, but the mother died.

DR. REGINALD THOMPSON asked what was the condition of Mr. Tait's patient after the operation. Had the ether anything to do with the fatal result. As an anæsthetic it seemed to him not so good as either chloroform or bichloride of methylene.

THE PRESIDENT inquired what was done so far as the placenta was concerned.

MR. TAIT, replying to the President, said that he left the placenta alone to come away bit by bit of its own accord. He had never seen any bad result from ether. The patient became more or less collapsed after the operation, was restless and wandering, and never really recovered the shock of the operation. There was never any rise of temperature. In fifteen cases of extra-uterine fœtation he had seen there was usually rupture of the Fallopian tubes about the eighth or twelfth week. If that took place on the free side there was fatal hæmorrhage, but if towards the attachment the patient's life might be saved for a time. In all or nearly all of these cases there was a history of illness about the period referred to. As to the so-called ovarian pregnancy, he did not believe in it. He would not operate in extra-uterine cases until the child was viable, except urgent symptoms demanded it.

ON THE TREATMENT OF PELVIC SUPPURATION BY ABDOMINAL SECTION AND DRAINAGE.

MR. LAWSON TAIT also contributed this paper, which advocated the principle of opening and draining the various conditions of suppuration classed as "pelvic abscess." The author pointed out, and quoted Dr. West in support, that in very many of these cases the abscess opened into the rectum or other part of the intestine, the bladder, or round amongst the muscles of the anterior abdominal wall. When such openings are established, either death occurred or recovery was extremely protracted. Even when the abscess opened into the vagina, or could be tapped from that canal, the recovery was frequently prolonged to an extent not commensurate with the size of the abscess. The author then narrated six cases of pelvic origin, all of which seemed to have originated in extra-peritoneal hæmatoceles. In none of them would vaginal tapping have been effectual in properly emptying the abscesses of the clot *débris*. They were opened from above, the opening into the abscess cavity being carefully stitched to the opening in the abdominal wall, save in one case where an already made adhesion rendered this part of the operation unnecessary. Wide glass drainage-tubes were inserted, and then were changed for smaller ones, and again for wire or soft rubber tubes. The abscesses were closed and the patients restored to health in about thirty days, and all the patients made rapid and complete recoveries. The author's general conclusion from these cases was that the opening of such abscesses by abdominal section was neither a difficult nor a dangerous operation; that recovery was made in this way more certain and rapid than in any other; and that in future he would always advise an exploratory incision in cases where he was satisfied there was an abscess, but where he could not reach it or empty it satisfactorily from below.

THE PRESIDENT said that Mr. Tait's paper opened up a new field in that department of surgery which had made most progress in recent years. He would ask if antiseptics were used, what were the size of the glass tubes employed, and whether any antiseptic precautions were taken to keep them sweet.

DR. J. HARLEY asked what was the condition of the small intestines, whether they were adherent or not, and whether their function was interfered with.

MR. KNOWSLEY THORNTON remarked on the great advance that had been made in recent years to redeem patients from the long misery they formerly suffered. He had treated two patients by abdominal section. He had enucleated two abdominal cysts, but the patient nearly bled to death into one of them. He re-opened the abdomen and removed the clots, and the patient did well. In another he used an india-rubber drainage-tube; but the case passed out of his hands and did not do well. There were plenty of cases on record where vaginal puncture had been employed with good success. Still, in many, abdominal section was to be preferred.

MR. SPENCER WELLS inquired what was the particular kind of cases in which abdominal section ought to be employed in preference to vaginal or rectal puncture. In many cases the plan of opening into the vagina did remarkably well, and in most the collection could easily be reached from the vagina or rectum. All that was required was to keep the trocar quite free to discharge the contents of the sac, and to use freely injections through it of iodised or carbolised water.

MR. MORRIS asked if Mr. Tait proposed to use this operation in all cases of pelvic cellulitis where the suppuration

pointed in the groin or iliac region. A man came under his care with difficulty of passing water due to an abnormality of the prepuce, and a warty scrotum apparently due to trickling of the water downwards. He also found a brawny condition of the pelvic integuments, and fistulæ in the perineum. The brawny mass afterwards softened, was opened, and a lot of stinking pus came away. Ultimately, he made an opening above Poupart's ligament, without touching the peritoneum, and made use of a drainage-tube. The case did well. He had seen many cases in females where an opening through the vagina was enough.

Mr. Morrant Baker inquired what were the lines of the operation, and desired to know some more exact details with regard to it.

Mr. Tait, in reply, said that he laid no great stress on antiseptics. In four cases they had been used, and in two not. The tubes had been introduced into practice by Koeberle, and in no case had any antiseptics been used with them after the first or second day. There were no intestinal adhesions in any case. The incision he invariably made in the middle line (as in ovariotomy), three or four inches long. In one case only this opening was extra-peritoneal. He had found no difficulty in making the stitches between the walls of the cavity and the peritoneum. Practically, he had no dread of peritoneal operations, and vaginal tapping was not satisfactory.

Case of Sub-coracoid Dislocation of the Humerus without Laceration of the Capsule.

Mr. Eve contributed a case of sub-coracoid dislocation of the humerus without laceration of the capsule, and with an indentation on the posterior surface of the head of the humerus. Thomas B., aged thirty-six years, was knocked down by a train while at work on the line. On admission to St. Bartholomew's Hospital he was found to have sustained a sub-coracoid dislocation of the right humerus, presenting the ordinary characters. The dislocation was readily reduced by traction with the heel in the axilla. He died twelve hours after the accident from injuries to the thorax. Except some laceration of the lower part of the deltoid, the muscles of the shoulder were not damaged. The joint was unopened, but on incising the capsule it was found to have been detached from the anterior margin of the glenoid cavity, but remained continuous with the periosteum. On the posterior surface of the head of the humerus, at the margin of the articular cartilage, a deep vertical indentation or grove was seen, into which the anterior margin of the glenoid cavity accurately fitted. The author remarked that the injury was probably produced by direct violence; but he had been unable to find on record a single case of traumatic dislocation in which the joint was not opened. The groove or indentation was doubtless, from its position and shape, produced by the forcible impact of the humerus against the anterior margin of the glenoid cavity. Malgaigne, who mentions two specimens of old dislocation forwards, in which somewhat similar grooves had been formed by attrition, thinks that they are sometimes produced as in the case related. An easy explanation of the mode of production of fracture of the anatomical neck, with dislocation of the head, is suggested by this case, for if the blow had been sufficiently forcible the head would have been chipped off by the anterior margin of the glenoid cavity, and would then have been displaced forwards; also an explanation of the cases of impacted fracture of the anatomical neck with rotation of the head of the humerus on its axis, which is borne out in several particulars by the two cases recorded by Mr. W. R. Smith. In both of these the head was displaced forwards.

CLINICAL SOCIETY OF LONDON.

Friday, May 14.

E. Headlam Greenhow, M.D., F.R.S., President, in the Chair.

Section of the Femur above the Small Trochanter for Angular Anchylosis of the Hip.

Mr. Richard Barwell read this paper. William D., aged twelve, had, when five years old, severe hip disease and many abscesses about the joint. After several years he got about on crutches, but the result was a thigh flexed at right angles to the pelvis and somewhat adducted—the deformity was extreme. The altered state of parts about the neck of the bone rendered section at that place inadmissible; section below the trochanters was rejected, because Mr. Barwell considers such operation must produce very considerable shortening, equal in amount to the distance from the centre of the head of the bone to a point below the small trochanter, namely, from two to three inches. The operation of Rhea Barton, and that of Lewis Sayre, viz., the removal of a wedge of bone from about the junction of the femoral neck and shaft, appears to aim at an unattainable result, since an artificial joint at this part of the body, even if it could be secured, could not be relied on to support the weight of the trunk. A review of the results obtained by those surgeons shows that of the two successful cases, one of Barton's and one of Sayre's, motion at the place of section was either never attained or soon ceased. In the case of William D. all such intention was therefore discarded. The author endeavoured simply to secure a straight limb without further shortening than that already produced by the loss of growth which accompanied the original disease. On October 30 the operation was performed antiseptically by making a crucial incision on the outer aspect of the great trochanter, down to the bone, peeling off the periosteum all round, finding the small trochanter and the tendon of the ilio-psoas muscle, passing above this latter part an armed needle, and drawing with the thread round the bone a chain saw, with which, obliquely upward and outward, the section was made. Barely twenty drops of blood were lost, the patient was taken to bed, and a weight suspended to the foot. No suppuration followed, nor indeed any other bad symptom, the temperature being good throughout. Union of soft parts took place by first intention except where the drainage-tube was inserted, and that channel healed as soon as the drain was withdrawn. The boy stands upright and straight, the limb parallel with the other; the shortening is barely an inch, and that appears due to lack of growth in the bone, not to the operation. He walks almost perfectly and without sway of the body. The author especially directed attention to the fact that this end was attained by an operation which, being sub-periosteal, secured so rapid a union of bone that the boy was in bed only thirty-three days. The temper and the small size of surgical needles gave rise to a little difficulty in getting a thread round the bone. An instrument devised on the principle of Bellocq's sound was exhibited by Mr. Barwell, who has tested the facility of its use on the subject. With this instrument the operation is quite easy.

Mr. Heath said that Adams' operation was good, but in many cases there was a degree of uncertainty, and where it could not be adopted Mr. Barwell's plan had much to recommend it. He had now a case under his care where it was hardly possible to tell through what structures one would cut, operating in the usual way. When the bone was cut below the trochanters, according to Mr. Gant's method, there was a risk of tilting forwards. Professor Sayre, when in this country, exhibited the model of a case referred to by Mr. Barwell, but it was very difficult to believe that it represented the exact state of matters. On the whole it was better to aim at a stiff limb than an uncertain joint.

Mr. Barwell, in reply, said that he considered Mr. Gant's operation as unsatisfactory. The case described and illustrated by Professor Sayre had been the subject of hot controversy. The patient was said to have died of tubercle of the lung, whilst many believed that it was pyæmia.

(*To be continued.*)

Hypodermic Injection of Chloroform in Sciatica.—Dr. Blache directs that the first injection of pure chloroform be made at the highest point of the seat of pain, throwing in a syringeful, or about one gramme and a fifth. Next day the injection should be made lower down, and the third day lower still. In certain cases even two or three injections may be made the same day, thus inserting three or four grammes of chloroform. In obstinate cases Dr. Besnier advises the injection of an entire syringeful at the highest point, a second opposite the great trochanter, a third near the head of the fibula, and a fourth at the malleolus. If the pain has not disappeared at the end of three or four days, recourse should be had to other means of treatment.—*Union Méd.*, May 11.

OBITUARY.

CHRISTOPHER JOHN GREATREX.

A WELL-KNOWN provincial practitioner has just passed away at the patriarchal age of four score years and ten. Mr. Christopher John Greatrex, of Eccleshall, died at his residence in that place on the 8th inst., having carried on a large practice in Eccleshall and the neighbourhood to within a fortnight of his death. He commenced the study of the profession at the Stafford Infirmary, and on leaving the Infirmary became a pupil under Sir William Blizard at the London Hospital in 1810, and attended also the lectures of Dr. Clutterbuck at his private class-rooms, where the London, Chatham, and Dover Railway-station now stands in Bridge-street. On completing his studies he practised his profession some time in Bath, finally removing to Eccleshall in 1815, where he continued to practise for sixty-five years. During this long period he was the medical attendant, whilst "in residence," and until the palace was removed to Lichfield during the time of Bishop Selwyn, of Bishops Cornwallis, Ryder, Butler, Bromstead, and Lonsdale. He was twice married. Six of his sons were present at his funeral, two of whom are members of the Royal College of Surgeons.

PROF. DAVID THOS. ANSTED, M.A. CANT., F.R.S., ETC.

THIS distinguished geologist, who, though not a member of the profession, was so well known to medical men, died on the 13th inst., after an illness of a few days, in the sixty-sixth year of his age, having been born in London in 1814. He received his early education in the metropolis, and in due course entered at Jesus College, Cambridge, and passed out in the Mathematical Tripos among the Wranglers in 1836. He took his M.A. degree three years after, and remained for some time a Fellow of his College. In 1840 he was appointed Professor of Geology in King's College, London, and Lecturer on his favourite branch of science in the Military School of Addiscombe in 1845, and also at the College of Civil Engineers, Putney. Having previously been appointed Vice-Secretary of the Geological Society, he in that capacity edited the early volumes of that Society's quarterly journals. In 1868 he became Examiner in Physical Geography in the Department of Science and Art, and frequently lectured at the Royal Institution, and has been a valuable contributor to geological science by the publication of several well-known works on the subject, and in the transactions and journals of learned societies at home and abroad.

MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen, previously elected, were admitted Fellows on May 13:—

Barlow, Thomas, M.D. Lond., 10, Montague-street, W.C.
Coupland, Sidney, M.D. Lond., 7, Nottingham-place, W.
Dickinson, Edward Harriman, M.D. Edin., Liverpool.
Donkin, Horatio Bryan, M.B. Oxon., 60, Upper Berkeley-street, W.
Goodhart, James Frederick, M.D. Aber., 27, Weymouth-street, W.
Kelly, Charles, M.D. Lond., Worthing.
King, Robert, M.B. Camb., 48, Harley-street, W.
Mahomed, Frederick Henry Horatio Akbar, M.D. Brussels, 12, St. Thomas-street, S.E.
Shaw, Thomas Claye, M.D. Lond., Banstead Asylum, Surrey.
Topham, John, M.D. Lond., 19, Collingham-road, S.W.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At the usual monthly examinations for the licences of the College, held on Monday, Tuesday, Wednesday, and Thursday, May 10, 11, 12, and 13, the following candidates were successful:—

For the licence to practise Medicine—

Cusack, Henry.
Dwyer, Henry Hamilton.
Ferguson, Henry Lindo.
Finucane, Edward Michael.
Forrest, William.
Isdell, L'Estrange.
O'Donnell, Thomas Joseph.
Payton, Thomas.

For the licence to practise Midwifery—

Cusack, Henry.
Dwyer, Henry Hamilton.
Forrest, William.
Isdell, L'Estrange.
O'Donnell, Thomas Joseph.
Paton, Thomas.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed their Primary Examinations in Anatomy and Physiology at a meeting of the Board of Examiners on the 14th inst., and when eligible will be admitted to the Pass Examination, viz.:—

Andrews, Archibald G., student of the London Hospital.
Baber, John J. Y., of St. George's Hospital.
Campbell, Harry, of St. Bartholomew's Hospital.
Downman, Charles F., of University College Hospital.
Griffin, James M., of Guy's Hospital.
Grimmer, Charles G., of St. Bartholomew's Hospital.
Hancock, H. Ruskin, of the Charing-cross Hospital.
Hunt, Edwin G., of Guy's Hospital.
Ramsden, Albert, of St. Bartholomew's Hospital.
Salter, George H., of St. George's Hospital.
Shuter, Charles Y., of Guy's Hospital.
Todd, Henry R., of Guy's Hospital.
Underwood, John C., of Guy's Hospital.

Twelve candidates were rejected. The following gentlemen passed on the 15th inst., viz.:—

Cowen, William R., student of St. Bartholomew's Hospital.
Ensor, Henry C., of Guy's Hospital.
Littlewood, John O., of Guy's Hospital.
Longman, George P., of Guy's Hospital.
Samut, Richard P., of Guy's Hospital.
Ward, Henry, of St. Bartholomew's Hospital.
Whistler, Charles W., of St. Thomas's Hospital.

Nine candidates were rejected.

The following gentlemen having undergone the necessary examinations for the diploma were admitted Members of the College at a meeting of the Court of Examiners on the 18th inst., viz.:—

Bassett, Henry T., Birmingham, student of Guy's Hospital.
Cantin, Louis A., Mauritius, of St. Bartholomew's Hospital.
Cook, George W. H., Southsea, of the London Hospital.
Crowther, George H., Wakefield, of the Leeds School.
Jones, Arthur, Higher Broughton, Manchester, of the Liverpool School.
Jones, Vincent A., Birmingham, of the Birmingham School.
Kingsland, Arthur T., Birmingham, of the Birmingham School.
Lane, James E., Norfolk-square, of St. Mary's Hospital.
Mackrell, A. S., Queen Anne-street, W., of St. Bartholomew's Hospital.
Megarry, John W., Lavender-hill, of the Belfast School.
Mott, Frederick W., Hastings, of University College Hospital.
Nance, Henry C., Eccleshall, of St. Bartholomew's Hospital.
Plummer, Charles J., Valparaiso, of Guy's Hospital.
Redman, Edwin M., Peckham, of University College Hospital.
Rhodes, James H. A., Liverpool, of the Liverpool School.
Runnalls, Harry B., New Quay, Cornwall, of St. Mary's Hospital.
Smart, Alfred, Luton, Beds, of Guy's Hospital.
Sturge, Henry H., Dartford, of Guy's Hospital.
Watson, Frank S., Isleham, Soham, of the Charing-cross Hospital.
Weldon, George, Brompton, of St. George's Hospital.
White, Alfred T. O., Lansdown-road, of St. George's Hospital.
White, Robert P., Wigan, of the Edinburgh School.
Young, Thomas M., South Shields, of the Newcastle School.

Eleven candidates were rejected. The following gentlemen passed on the 19th inst., viz.:—

Alexander, John, Trinity-square, S.E., student of Guy's Hospital.
Barton, William E., Etchingham, Sussex, of University College Hospital.
Cook, John W. C., Colchester, of the London Hospital.
Cross, Thomas B., Scarborough, of Guy's Hospital.
Davies, Arthur M., Barnard's-inn, of Westminster Hospital.
Fenwick, Edwin H., Harley-street, of the London Hospital.
Harker, Thomas, Pateley Bridge, Yorks, of University College Hospital.
Hitch, Frederick, Bromley-by-Bow, of Guy's Hospital.
I'Anson, George, Great Portland-street, of the Middlesex Hospital.
Long, Edwin W., Southsea, of University College Hospital.
Pilkington, Frederick W., Chorley, of Guy's Hospital.
Rusworth, Frank, Carlton-hill, N.W., of St. Bartholomew's Hospital.
Rushworth, Norman, Carlton-hill, N.W., of St. Bartholomew's Hospital.

Fourteen were rejected.

Collegiate Examinations.—The following questions on Surgical Anatomy, and the Principles and Practice of Surgery, were submitted to candidates at the pass examination on the 14th inst., viz.:—1. Supposing a portion of the musculo-spiral nerve, as it passes behind the humerus, to be removed in an operation, describe fully the condition in which you would expect to find the limb a year afterwards. 2. Describe the relations of the common carotid arteries in the neck. How is the circulation carried on after one of them has been tied? 3. What forms of abscess may occur in connexion with the mammary gland? How should they be treated locally and generally. 4. Explain how stricture of the urethra may lead to extravasation of urine; give the treatment you would adopt in such a case. 5. Describe the appearances and treatment of the various forms of lupus. 6. Describe fully the treatment of a case of strangulated hernia after operation. On the 15th the candidates were examined in Medicine, when the following questions were submitted to them, viz.:—1. Describe the symptoms and pathological conditions of rheumatism, gout, and rheumatoid arthritis respectively, with the treatment proper to each. 2. Give the causes, symptoms, and treatment of peritonitis. 3. State the uses

and doses of the following drugs:—Ipecacuanha, elaterium, digitalis, extract of strammonium, liquor strychniæ, liquor morphiæ acetatis, sulphate of zinc, nitrate of silver, dilute sulphuric acid, and dilute hydrocyanic acid. State the composition of the following drugs:—Compound ipecacuanha powder, compound kino powder, compound jalap powder, compound mixture of senna, compound tincture of camphor.

APOTHECARIES' HALL, LONDON.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, May 13:—

Black, William Glaholm, Ludhoe Grange, Durham.
Condon, James Hunt, Sydenham, Kent.
Crane, Charles Robinson, Charing-cross Hospital.
Powell, Henry Albert, 32, Huntley-street, W.C.
Schmidt, Wolfgang, 127, Leman-street, E.
Stevenson, Henry Wickham, 22, Charterhouse-square.
Tew, James Scott, 5, Marquis-terrace, N.W.

The following gentlemen also on the same day passed their Primary Professional Examination:—

Hull, Walter, St. Thomas's Hospital.
Parke, Charles James, Guy's Hospital.
Phillips, Frank Leslie, Queen's College, Birmingham.

BIRTHS.

CARMICHAEL.—At Wyrley Grove, Stafford, the wife of William Carmichael, M.D., late R.N., of a daughter.

CLARKE.—On April 11, at Somerset East, South Africa, the wife of Thomas Forze Clarke, M.R.C.S., of a daughter.

COLMAN.—On May 9, at Buckingham-road, Brighton, the wife of W. T. Colman, M.R.C.S., of a daughter.

FAIRBANK.—On May 15, at Moulsey House, Windsor, the wife of William Fairbank, M.R.C.S., of a daughter.

FRASER.—On April 15, at 37, Melville-street, Edinburgh, the wife of Thomas R. Fraser, M.D., F.R.C.P., F.R.S., Professor of Materia Medica in the University of Edinburgh, of a son.

ORMEROD.—On May 18, at 25, Upper Wimpole-street, Cavendish-square, the wife of Joseph Arderne Ormerod, M.B., of a son.

PARKER.—On May 6, at Haverigg House, Gosforth, Cumberland, the wife of Charles A. Parker, M.D., of a son.

REYNOLDS.—On May 10, at 369, Coldharbour-lane, Brixton, the wife of John Reynolds, L.R.C.P., M.R.C.S., of a son.

SIMPSON.—On May 13, at 52, Queen-street, Edinburgh, the wife of Professor Simpson, M.D., of a son.

SMITH.—On May 12, at 1, Clapton-square, the wife of Roland Smith, M.R.C.S., of a daughter.

WORLEY.—On May 16, at Brooke Lodge, De Beauvoir-road, N., the wife of W. C. Worley, L.R.C.P., of a son.

MARRIAGES.

BABER—WALKER.—On May 18, at Walham Green, S.W., Henry Aitken Baber, M.R.C.S., to Adeliza Ann, youngest daughter of the late Sanderson Walker, M.D., of St. Michael's, Azores.

BISDÉE—ROGERS.—On May 12, at Helston, Alfred James Bisdée, M.R.C.S., L.S.A., of Hopewell House, Clevedon, Somerset, to Emily Mary, eldest daughter of Henry Rogers, of Nansloe, Helston, Cornwall.

SELF—CORSER.—On May 12, at Stepney, James Self, M.D., of Mile-end, to Robertina, youngest daughter of the late Robert Corser, Esq., of Redhill.

DEATHS.

BRACEY, W. ARTHUR, M.R.C.S., at 46, Bristol-street, Birmingham, on May 8, aged 62.

DASHWOOD, CHARLES BURTON, M.R.C.S., formerly of Great Yarmouth, at Norwich, on May 15, in his 73rd year.

EVEREST, HENRY, F.R.C.S., at 14, Westbourne-terrace-road, on May 12, aged 64.

FERGUSON, KATHLEEN MARY, daughter of Surgeon-Major Ferguson, M.D., A.M.D., on board H.M. troopship *Jumna*, on May 13, aged 3 years and 7 months.

FOX, EDWARD CHARLTON, M.D., at Auckland, New Zealand, on March 8.

MALCOLM, ROBERT BAINES, M.D., at 126, George-street, Edinburgh, on May 15.

WOOD, THOMAS CHRISTOPHER, M.D., at Brixton, on May 17, aged 77.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BELGRAVE HOSPITAL FOR CHILDREN, 79, GLOUCESTER-STREET, S.W.—Physician. Candidates, who must be graduates in medicine of a British university, and Fellows or Members of the Royal College of Physicians, are requested to communicate, in writing, with the Hon. Secretary, at the Hospital, on or before May 30.

BELGRAVE HOSPITAL FOR CHILDREN, 79, GLOUCESTER-STREET, S.W.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to be sent to the Hon. Secretary, at the Hospital, on or before May 30.

CARLISLE DISPENSARY.—Junior House-Surgeon. (*For further particulars see Advertisement.*)

LEEDS AMALGAMATED FRIENDLY SOCIETIES' MEDICAL AID ASSOCIATION.—Assistant-Surgeon. Candidates must be duly qualified and registered. Applications, with testimonials, to be sent to George Hackett, Esq., 5, Artillery-terrace, Roundhay-road, Leeds, on or before May 25.

NOTTING-HILL PROVIDENT DISPENSARY.—House-Surgeon. Applications, with testimonials, to be sent to the Hon. Secretary, W. P. Collins, Esq., 8, Pembridge-gardens, Notting-hill, W., on or before May 25.

ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY, WIGAN.—Junior House-Surgeon. Candidates must have two qualifications, and be prepared to enter into an agreement not to practise in the Wigan Union for a period of three years. Applications, stating qualifications, etc., with testimonials, to be sent to the Secretary, Will Taberner, Esq., on or before May 29.

SHEFFIELD GENERAL INFIRMARY.—House-Surgeon. (*For further particulars see Advertisement.*)

TORBAY HOSPITAL AND PROVIDENT DISPENSARY, TORQUAY.—Junior House-Surgeon and Dispenser. Candidates must be qualified in medicine and surgery, registered under the Medical Act, and unmarried. Testimonials to be sent to the Hon. Secretary, W. H. Kitson, Esq., Hemsworth, Torquay, on or before May 22.

WHITEHAVEN AND WEST CUMBERLAND INFIRMARY AND FEVER HOSPITAL.—House-Surgeon. Applications, with testimonials (prepaid), to be made to the Secretary, Mr. J. A. Knight, before June 25.

WONFORD HOUSE HOSPITAL FOR THE INSANE, EXETER.—Assistant Medical Officer. Candidates must be fully qualified. Further particulars can be obtained from Dr. Phillips, Medical Superintendent, Wonford House, Exeter, to whom applications, with testimonials, are to be sent not later than June 1.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Bellingham Union.—Mr. William Oliver has resigned the Fourth District: area 9860; population 1128; salary £12 per annum.

APPOINTMENTS.

Basford Union.—Samuel Armstrong, M.R.C.S.E. and L.S.A., to the Ilkeston District.

Bramley Union.—George Metcalfe Sharpe, L.F.P.&S. Glasg., and L.S.A. Lond., to the Farnley District.

Cannock Union.—Moses Taylor, M.R.C.S. Eng. and L.S.A. Lond., to the Workhouse.

Docking Union.—Herbert Francis Prince, L.F.P.&S. Glasg., L.M. and L.S.A. Lond., to the Snettisham District.

Manchester Township.—John Henry Pettinger, L.R.C.P. Edin., M.R.C.S. Eng., L.S.A. Lond., to be Resident Assistant Medical Officer at the Crumpsall Workhouse.

Meriden Union.—Miles Wolfe Carr Partrige, L.R.C.P. and L.R.C.S. Edin., to the Meriden District and the Workhouse.

Tendring Union.—Robert Chapman Atthill, L.R.C.P. Edin., L.F.P.&S. Glasg., and L.S.A. Lond., to the Seventh District.

THE NEW COTTAGE HOSPITAL AT BOURTON.—The Committee of the Bourton-on-the-Water Cottage Hospital may fairly be congratulated upon the result of their exertions on behalf of this small but useful institution. Their annual report for the year 1879 explains that the former institution, the old Bourton-on-the-Water and Cotswold Village Hospital, which was established in 1861, came to an end on September 29 last, and on that day the new hospital, built by voluntary contributions on a site presented by a local supporter, was opened for public use. About £1000 has been expended in the erection of the new building, and the whole of this sum has been collected with the exception of about £160. During the past year thirty-nine patients were admitted for treatment by Mr. John Moore and Mr. Alfred Burt, the medical officers of the institution, the average daily number of beds occupied being five. The report concludes with an appeal for increased assistance to promote the usefulness of the new building.

CONGENITAL VARIOLA.—Prof. Depaul related the following case at the Académie de Médecine:—A woman gave birth on April 30 to a dead and macerated infant at between the sixth and seventh month. At the end of January she had an attack of non-confluent small-pox, from which she had completely recovered by February 15. On examination, small-pox pustules were distinctly recognisable on the body of the infant in spite of its state of maceration. About eighty of these were counted on the chest, neck, back, and limbs. The placenta was carefully examined, and presented a great number of points of fatty degeneration—so that it could not be positively affirmed whether the child died in consequence of the variola or of the disease of the placenta. M. Blot referred to a case in which the mother served as a vehicle for the variolic virus without herself becoming attacked. When five months advanced in pregnancy she had been to see a friend who was suffering from small-pox. Some days afterwards she had a miscarriage, the fœtus being covered with small-pox pustules, while the mother exhibited no signs of the disease. —*Bulletin de l'Acad. de Méd.*, May 4.

CÆSARIAN OPERATION DURING THE AGONY OF DEATH.—At the Berlin Obstetrical Society, Dr. Runge related a case (*Berlin. Klin. Woch.*, April 26) in which he had performed Cæsarian section, saving a living child, while the mother was in the agonies of death from a cerebral tumour. She died while the ligatures were being applied. Adverting to the general question, he observed that the prognosis of the child's life was more favourable than in the post-mortem section. He admitted, however, that great difficulty often attended determining the indications, especially in diseases which are not absolutely fatal. He thinks, however, when the mother's death can in a short time be certainly predicted, and delivery by the natural passages does not offer a better prospect, the operation should be proceeded with as soon as the symptoms indicate that the child's life will be lost before that of the mother unless interference promptly takes place. [This line of procedure seemed to meet with the approbation of the members present. We think, however, that in such a case the Italian practice of delivery by the natural passages, which is usually easily effected under these circumstances, is far more humane.]

PATHOLOGICAL CONDITION OF THE SPINAL CORD IN PHOSPHORUS-POISONING.—Dr. Danillo, after observing that little has been done with reference to the influence of phosphorus-poisoning on the spinal cord, furnishes an account (*St. Petersburg. Med. Woch.*, May 8) of the results of a series of experiments which he has performed in Prof. Mierzejewski's laboratory by administering large doses of phosphorus to dogs. He describes at length the appearances of the spinal cord, and thus sums up the results of his investigations :—1. Large doses of phosphorus given at short intervals induce acute parenchymatous myelitis, with massing of pigment and extravasations of blood. 2. Continued for a longer time in smaller doses, it gives rise to myelitis centralis in all its stages. 3. According to the dose of phosphorus exhibited, myelitis of different degrees of intensity may be produced. 4. In phosphorus-poisoning a large amount of pigment formation takes place—a fact which no one has hitherto recorded. 5. As myelitis can be produced by phosphorus, it becomes highly probable that a portion of the complex nervous symptoms which poisoning by this substance gives rise to may be the clinical expression of the myelitis which has been induced.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Health of Brighton.—Dr. R. P. B. Taaffe, Medical Officer of Health for the borough, in his annual report for the year 1879, shows that the death-rate was 18·9—the lowest of the twenty large towns with the exception of Portsmouth.

Paddy.—The charges of the Cow-pock Institution of Dublin, at the time you mention (1860), were 2s. 6d. to private persons for vaccine lymph. Medical practitioners were supplied at 10s. 6d., and union workhouses at a guinea a year. The institution received a grant from Parliameut, the object being the gratuitous vaccination of the poor.

A Determination to be Commended.—The magistrates at Brighton, in delivering their sentence of a month's hard labour without the option of a fine in the case of a butcher for having in his possession a quarter of unwholesome beef, said they had determined to put a stop to the traffic in diseased and unwholesome meat which was being carried on in the town: hence the severity of the punishment. It appeared that a portion of the meat had been made into 37 lbs. of sausages, some of which had been sold to a second butcher, who was in prison for having disposed of some of them. The remainder of the meat was seized at a slaughter-house by an inspector, was condemned, and destroyed.

London Factories and London Fires.—The recent fire in the Gray's-inn-road has suggested an inquiry from Mr. Mackonochie, in a letter to a morning contemporary, which raises a question of considerable moment to the dwellers in densely populated districts of London. He asks if it is right that factories of highly inflammable substances should be established in their midst. The conflagration to which he refers did not, however, originate in any such factory, but in a cabinet-maker's; and the destructive consequences of the fire were not caused so much by any specially explosive or inflammable substances, as to the fact—unfortunately too often the case—that the locality was thickly covered with old and cheaply constructed tenements, many of them built of wood. No doubt the risks of fire might be much minimised by the imposition of some obvious precautions by local authorities.

A. Horace C., South Kensington.—The experiments in vaccinating sheep began in 1862, and were concluded in 1863: the official report on which was to the general effect that sheep had been found very imperfectly susceptible of vaccination, and that the vaccination so taken afforded no real security against the sheep taking small-pox.

Amateur.—We believe there is no Act of Parliament for the protection of actors and actresses from the danger to which they are now exposed at the theatres, owing to the inflammable nature of the dresses worn by the performers, but the Lord Chamberlain embodied his views upon the subject some time ago—in 1864, we think,—in a memorandum signed by himself, which was sent to managers of theatres, accompanied by a series of regulations for the more effectual prevention of accidents.

The Climate of Cyprus.—M. Gabriel Charmes, a correspondent of the *Débats*, having recently visited Cyprus, writes that as regards the climate there has been much exaggeration. He has been told that the English medical men do not understand adapting the treatment of fevers to different climates. The Cyprus fever is, he says, a malady which all visitors may expect to suffer from, but with proper medical care it passes quickly away.

A Parish Requisite.—We hope the strongly urged recommendation of the juries at the inquests held last week at the St. Pancras Workhouse, for the erection of a public mortuary, will receive immediate attention. A mortuary is a public sanitary necessity for so extensive and populous a district, which the Sanitary Authority should not neglect to provide. It appears that the dead bodies at present are removed to the deadhouse at the workhouse, and placed there in charge of a pauper attendant.

L. L. P., Hants.—In 1836 an Act of Parliament was passed, giving power to the coroners to have post-mortem examinations made. In 1837 an Act was procured by the Poor-law Commissioners forbidding the expenses of the coroners to be taken, as they had previously been, out of the poor-rate, and making it imperative that the justices should pay them out of the county rate.

Soldiers as Medical Dispensers.—The fitness of soldiers to act as dispensers would appear to be questionable; at all events, the facility thus afforded of access to the surgery has led to the following fatality:—Two gunners in the Royal Marine Artillery, named Bonner and Huggett, stationed at Eastney, were out with their wives at night, and returned with some whisky. Bonner, who acts as a dispenser, invited the others to drink in the surgery. Huggett became insensible, and has since died, and Bonner and the two women were sick. It is believed that the glass used had previously contained morphia, and Huggett, drinking the last, took the greater portion of the drug that remained in it. The deceased was thirty-four years old, and has left a wife and four children.

A London Water Company Fined for Cutting off the Supply.—The Southwark police-magistrate, on hearing a summons against the Southwark and Vauxhall Water Company, remarked that the Company should not exercise their enormous power unless they were right, as it was a very serious matter, cutting off the supply of water from houses in a dense population like that of Bermondsey. The facts of the case were as follows:—The owner of several small houses in George-row, Bermondsey, summoned the Secretary for neglecting to supply water to one of the houses. The houses were supplied by pipes connected with the main at the house for which the summons was issued. For the defence it was alleged that in all the other houses the cisterns were dirty and defective, and the supply was therefore cut off, but was put on again when the repairs were done. But as to the house upon which the others depended for their supply, there was no defect. The magistrate said that as the Company had not acted recklessly he should merely inflict a nominal fine of 10s., and 1s. for each of the three days that the water was disconnected.

COMMUNICATIONS have been received from—

Mr. W. SPENCER WATSON, London; Mr. SHIRLEY MURPHY, London; Dr. E. I. SPARKS, Marguerita; Dr. RADCLIFFE CROCKER, London; Dr. J. W. LONGMORE, London; Mr. THOMAS STOKES, Cheltenham; Dr. BYROM BRAMWELL, Edinburgh; Dr. TIBBITS, London; THE SECRETARY TO THE GLASGOW HOSPITAL AND DISPENSARY FOR DISEASES OF THE EAR; Mr. J. E. INGPEN, London; THE REGISTRAR OF THE ROYAL COLLEGE OF PHYSICIANS, London; Mr. C. T. MARZETTI, London; Mr. GEO. SPELLER, London; THE HONORARY SECRETARIES OF THE SOCIETY OF MEDICAL OFFICERS OF HEALTH, London; THE REGISTRAR OF APOTHECARIES' HALL, London; THE SECRETARY TO THE ROYAL POLYTECHNIC INSTITUTION, London; Mr. GEO. S. DAVIS, Detroit, Michigan, U.S.A.; Dr. GAVIN MILROY, Richmond, Surrey; Mr. S. H. BURTON, Norwich; Dr. J. W. MOORE, Dublin; Mr. R. W. PARKER, London; Mr. J. CHATTO, London; THE SECRETARY OF THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY; Mr. T. M. STONE, London; THE SECRETARY OF THE OBSTETRICAL SOCIETY, London; THE SECRETARY OF THE ANTHROPOLOGICAL SOCIETY, London; Dr. LEONARD SEDGWICK; THE SECRETARY OF THE ROYAL INSTITUTION, London; Mr. J. WARD COUSENS, Southsea; Dr. TAYLOR, London; Mr. PAGE, Dublin; Messrs. NEWMAN AND Co.; Dr. CARTER, Liverpool.

BOOKS, ETC., RECEIVED—

Report on the Health of Bradford for the Year 1879, by Mr. Harris Butterfield—Annual Report of St. George's Hospital and of Atkinson Morley's Convalescent Hospital for the Year 1879—Water-Supply, by Mr. J. H. Balfour Browne—A Guide to the Practical Examination of Urine, by James Tyson, M.D.—Medical Education, by P. H. Pye-Smith, M.D.—Long Life, and how to Reach it—Eyesight, and how to Care for

it—The Throat and the Voice—The Mouth and the Teeth—Modern Abuse of Gynæcology, by Clifton E. Wing, M.D. Boston—Report on the Health of the Borough of Birmingham for the Year 1879, by Alfred Hill, M.D., F.I.C.—Report on the Health of the Borough of Birmingham for the Quarter ending April 3, 1880, by Alfred Hill, M.D., F.I.C.—Thomas Keith and Ovariotomy, by J. Marion Sims, M.D., LL.D.—The Diagnosis of Diseases of the Spinal Cord, by W. R. Gowers, M.D., F.R.C.P.—Caries of the Ankle in Children, by V. P. Gibney, A.M., M.D.—Florida, U.S.A., by Mr. R. W. Wilson—The Doom of the Great City, by Mr. William Delisle Hay—The General Medical Councils, by Archibald Hamilton Jacob, M.D.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Centralblatt für die Medicinischen Wissenschaften—Nature—Revue Médicale—Occasional Notes—Gazette Hebdomadaire—Louisville Medical News—El Siglo Medico—Journal of Commerce, Liverpool, May 13—Revue d'Hygiène—Boston Journal of Chemistry—Monthly Review of Dental Surgery—Washington National Board of Health Bulletin—Nordiskt Medicinskt Arkiv—Boston Medical and Surgical Journal—American Bookseller—Detroit Lancet—The Pioneer, Allahabad, April 22, 1880.

APPOINTMENTS FOR THE WEEK.

May 22. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

Royal Institution, 3 p.m. Prof. H. Morley, "The Dramatists before Shakespeare."

24. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

25. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Royal Institution, 3 p.m. Mr. Fiske, "American Political Ideas."

Anthropological Institute, 8 p.m. Mr. John Milne, "On the Stone Age in Japan." Mr. C. Pfoundes, "On the Japanese People."

Royal Medical and Chirurgical Society, 8½ p.m. Mr. William Adams, "On the Treatment of Lateral Curvature of the Spine by Steel Supports, Plaster-of-Paris Jacket, etc." Mr. Henry Morris, "On Epithelioma of the Neck following a Patch of Chronic Skin Disease, in which the Cancer was twice Excised, and the Jugulars Ligatured."

26. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Lister), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.; National Orthopædic, Great Portland-street, 10 a.m.

27. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

National Health Society (Hertford-street), 4 p.m. Mr. Ernest Hart, "On the Doctor in the Kitchen."

Royal Institution, 3 p.m. Mr. T. W. R. Davids, "Buddhist Sacred Books."

28. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m., Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

Quekett Microscopical Club (University College), 8 p.m. Mr. A. D. Michael, "On two Species of Acarina, not hitherto recorded as British."

Clinical Society, 8½ p.m. Report of the Committee on Dr. Crocker's Case of Congenital Disease of the Scalp. Report of the Committee on Keloid. Dr. Graily Hewitt, "On a Case of Acute Hysterical Vomiting of Ten Months' Duration, caused by Displacement of the Uterus." Mr. Clutton, "On a Case of Acquired Hypertrophy of One Limb." Mr. Henry Morris, "On Two Cases of Disease of the Mastoid Bone, in one of which a Severe Attack of Herpes of the Face followed Thrombosis of the Jugular Vein and Lateral Sinus." Dr. F. Taylor, "On an Unusual Case of Cardio-Pulmonary Bruit." Dr. Whipham, "On a Case of Cancer of the Pylorus; Ulceration of the Cancerous Growth, and formation of an Abscess between the Pylorus and the Liver; Gangrene of the Left Foot and Leg."

Royal Institution (Council Meeting, 8 p.m.), 9 p.m. Mr. F. Hueffer, "Musical Criticism."

VITAL STATISTICS OF LONDON.

Week ending Saturday, May 15, 1880.

BIRTHS.

Births of Boys, 1377; Girls, 1310; Total, 2637.
Corrected average in the 10 years 1870-79, 2467·0.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	698	691	1389
Average of the ten years 1870-79, corrected to increased population	791·1	720·6	1511·7
Deaths of people aged 80 and upwards ...	...	...	35

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa
West	561359	...	10	3	3	15	...	1	...	1
North ...	751729	4	6	12	3	27	...	3	...	1
Central ...	334369	...	1	2	...	8	...	...	...	1
East	639111	...	1	12	...	14	...	...	...	6
South	967692	4	6	18	1	25	...	4	...	4
Total	3254260	8	24	47	7	89	...	8	...	13

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·922 in.
Mean temperature	52·1°
Highest point of thermometer	76·9°
Lowest point of thermometer	35·7°
Mean dew-point temperature	44·2°
General direction of wind	N.N.E., N.E., & E.N.E.
Whole amount of rain in the week	0·00 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, May 15, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1880.*	Persons to an Acre. (1880.)	Births Registered during the week ending May 16.	Deaths Registered during the week ending May 15.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Centimetres.
London	3664149	48·6	2687	1389	76·9	35·7	52·1	11·17	0·00	0·00
Brighton	107321	45·6	54	37	72·0	36·5	50·8	10·45	0·01	0·03
Portsmouth ...	134224	29·9	84	52	...	...	...	...	...	...
Norwich	85827	11·5	60	26	66·2	37·2	48·9	9·39	0·05	0·13
Plymouth	74993	53·8	47	44	66·9	39·1	51·2	10·67	0·00	0·00
Bristol	213536	48·0	158	79	70·0	35·7	48·1	8·95	0·15	0·38
Wolverhampton ...	75970	22·4	51	33	63·5	34·8	46·4	8·00	0·58	1·47
Birmingham ...	394738	47·0	323	170	...	...	...	...	...	...
Leicester	129912	40·6	108	44	66·2	35·5	48·2	9·00	0·73	1·85
Nottingham ...	173827	17·4	135	78	64·8	37·0	47·9	8·83	0·42	1·07
Liverpool	544056	104·4	405	286	64·0	39·0	49·0	9·44	0·17	0·43
Manchester ...	363130	84·6	231	175	...	...	...	...	...	...
Salford	185786	35·9	142	83	...	...	...	...	...	...
Oldham	115413	24·7	74	39	...	...	...	...	...	...
Bradford	197196	27·3	124	85	60·4	37·2	46·7	8·17	0·29	0·74
Leeds	318929	14·8	223	109	...	...	...	...	...	...
Sheffield	304938	15·5	217	122	58·0	37·5	45·9	7·72	0·19	0·48
Hull	149627	41·2	121	64	57·0	34·0	44·6	7·01	0·18	0·46
Sunderland ...	116730	42·2	104	53	59·0	38·0	47·9	8·83	0·32	0·81
Newcastle-on-Tyne	149366	27·8	105	61	...	...	...	...	...	...
Edinburgh	229839	54·8	146	90	57·3	34·1	46·3	7·95	0·29	0·74
Glasgow	589598	97·7	376	315	61·3	38·3	49·2	9·55	0·20	0·51
Dublin	314666	31·3	175	212	58·8	32·0	47·5	8·61	0·09	0·23
Total of 23 Towns in United Kingdom	8633571	39·2	6150	3645	76·9	32·0	48·2	9·00	0·23	0·58

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·92 in. The highest reading was 30·13 in. on Sunday morning, and the lowest 29·75 in. on Tuesday afternoon.

* The figures for the English and Scottish towns (except for Nottingham, Salford, and Oldham) are the numbers enumerated in April, 1871, raised to the middle of 1880 by the addition of nine years and a quarter's increase, calculated at the rate which prevailed between 1861 and 1871. Revised estimates have been adopted for Nottingham, Salford, and Oldham, based upon special returns of inhabited houses existing within those boroughs; the population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

THE LUMLEIAN LECTURES

ON THE

DIGESTIVE FERMENTS AND THE PREPARATION AND USE OF ARTIFICIALLY DIGESTED FOOD.

Delivered before the Royal College of Physicians.

By WILLIAM ROBERTS, M.D., F.R.C.P., F.R.S.,
Physician to the Manchester Royal Infirmary;
Professor of Clinical Medicine to the Owens College.

Lecture III.—Part II.

Nutritive Value of Peptonised Food.

At the outset of this inquiry we are met with the question, Is it certain that the ultimate products of digestion are of equal nutritive value to the mixed transitional products which are produced in succession, and probably absorbed as the food is gradually transformed in the alimentary canal?—in other words, Are maltose and peptones alone as valuable to the economy as a mixture of these substances with the several dextrines and hemipeptones which are presented to the absorbent surfaces in the course of natural digestion?

With regard to the products of starch-digestion, no direct experiments have been made on the nutritive value of maltose, and we can do little more than conjecture that the intermediate dextrines have a usefulness of their own. That they are absorbed seems proved (as might have been expected from their known diffusibility), for they have been detected in the blood, and especially in the blood of the portal vein.

With regard to peptones, we have more information. It was naturally assumed by the earlier observers who identified peptone as the chief ultimate product of digestion that this was the form under which proteids were taken up by the absorbents, and introduced into the blood for the nutrition of the tissues. But some ten years ago doubts were cast on this conclusion. It was alleged by Brücke and Voit that the nutrition of the tissues was maintained not by peptone, which was unfitted for this purpose, but by soluble albumen, which was absorbed in the undigested state from the primæ viæ, and that the office of peptone was a subordinate one, resembling that of gelatin, and consisted in aiding to preserve the tissue-albumen from too rapid destruction. Direct observations on the nutritive value of peptones have, however, shown this paradoxical view to be untenable. As the point is one of importance, I will endeavour to lay before you the proofs which have been already adduced of the food value of peptones, and I will supplement these by some observations by myself.

P. Plosz(a) was the first to put this question to the test of direct experiment. He fed a puppy dog weighing 1302 grams with an artificial compound made of fat and sugar, in imitation of milk, but in which the casein was replaced by artificially digested fibrine. In the course of eighteen days of this diet the dog grew and increased 501 grams in weight.

R. Maly(b) performed a similar experiment on a pigeon. He first fed the pigeon for several days on a regulated quantity of wheat until he had ascertained the quantity requisite to keep the bird in a state of nutritive equilibrium, in which it neither gained nor lost weight. He then made an artificial corn from starch, fat, gum, salts, and water, but in which the gluten was replaced by fibrin-peptone, and fed the pigeon on the same quantity of this artificial corn as he had before given of the natural corn. Under this novel diet the bird, after a short apprenticeship, not only maintained its weight, but actually put on flesh. This experiment seemed to show that peptone was even superior to natural gluten as a nutriment.

It was, however, objected to these experiments that they did not rigorously prove that peptone could build up the tissues, inasmuch as the increase of weight might have been due to an excessive accumulation of fat or of water, and that there might have been not an increase, but a decrease, of the structural elements which contained nitrogen.

To meet these objections, Plosz and Gyergyai(c) instituted a third set of experiments on a dog weighing 2753 grams. He was first brought down by a diet of simple water to a weight of 2531 grams. He was then fed on a mixture composed of sugar, starch, and fat, and containing in addition 5 per cent. of purified peptone. Of this mixture about 400 grams were daily administered to the animal for a period of six days. In these six days the dog took in with his food 14·45 grams of nitrogen, but the total of the nitrogen excreted by the urine and fæces only amounted to 13·46 grams, so that nearly one gram of nitrogen had been retained in the body of the animal, which had increased in weight 259 grams. This experiment went to prove that peptone served to repair the wear and tear of the nitrogenised structural elements, and even contributed something to the increase of weight.

Adamkiewicz,(d) by a still more rigorous method, in a laborious series of experiments on a dog, which was fed on a diet wherein the only possible source of nitrogen was peptone prepared from blood-fibrin, arrived at the conclusion that peptone supplied nitrogen to the solid tissues, and that it possessed a nutritive value equal to albumen, or even slightly superior; and that, therefore, it could not be looked on as a bye-product of digestion, but as the chief resultant of the transformation of proteids in the alimentary canal.

The experiments above cited seem sufficient to settle definitely the question raised by Brücke and Voit, and to establish the nutritive value of peptone as a source of nitrogen to the tissues. It seemed, however, desirable to obtain direct proof of the nutritive value of peptonised milk as compared with the natural article. My observations led me to the conclusion that it was far easier to get a supply of peptonised aliment suitable for invalids by the artificial digestion of milk by pancreatic extract than by any other method. But in so important a matter as the feeding of invalids, inference and conjecture seemed hardly a sufficient basis for actual practice.

The questions I proposed to myself were—(1) Is artificially digested, or peptonised, milk alone sufficient to sustain nutrition? and (2) is it as efficient in this respect as natural milk? For the purpose of answering these questions I procured four kittens, of the same brood, eight weeks old. Kittens at this age thrive perfectly on an exclusively milk diet. Two of the kittens were fed on natural milk, and the two others on milk previously digested by pancreatic extract. The digestion of the milk in the latter case was carried out to full completion—that is to say, until the milk became greyish and bitter, and no longer gave any precipitate with acetic acid, nor even with nitric acid. The animals were permitted to have as much of their respective foods as they could consume. The experiment was continued for a period of twenty days. The quantity consumed by each pair was as nearly as possible the same. All four continued in perfect health, and took their nutriment greedily. I was surprised to find that the pair fed on peptonised milk showed no repugnance to the bitter taste of their food, but appeared to relish it quite as well as their companions did their natural milk. The following table exhibits the gain in weight at the end of twenty days by each of the four kittens. The weights are given in grams, and in round numbers:—

Diet.	Initial weight.	Weight at the end of 20 days.	Increase of weight.	Increase of weight per cent.
Natural milk ...	No. 1—338	514	176	52
	„ 2—558	838	280	50
Fully peptonised milk	„ 3—403	626	223	55
	„ 4—374	562	188	50

The table shows that the percentage increase of weight was very nearly alike in all four animals. No difference could be perceived in the sleekness of their coats nor in the vivacity of their gambols. The experiment proves that peptonising the milk in no degree spoils its nutritive value. It also shows, as might have been expected, that in healthy

(a) *Pflüger's Archiv f. d. ges. Physiologie*, 1874, 323.
(b) *Ibid.*, p. 585.
(c) *Pflüger's Archiv*, Bd. x., 1875, p. 5 6.
(d) "Natur und Nahrwerth des Peptons." Berlin, 1877.

animals, with abundance of digestive power, there is no advantage to be gained from the administration of food in a pre-digested state. The quantity of food which is taken and absorbed appears to be regulated not so much by the quantity which can be digested as by the quantity which can be assimilated. This experiment had an interesting sequel. After Nos. 3 and 4 had been fed on *fully* peptonised milk for a period of twenty days, they were fed for a period of ten days on *partially* peptonised milk. By using a less quantity of the pancreatic extract in proportion to the milk, and by allowing the process of artificial digestion to go on for not more than half the time allowed in the previous experiment, only a partial conversion of the casein was effected. As nearly as I could judge by the precipitate caused with acetic acid, the casein was digested to about the extent of one-half. Under these circumstances, I certainly expected that Nos. 3 and 4 would gain weight as before, and would continue to thrive as well as Nos. 1 and 2. It might have been anticipated that under these new conditions the proper digestive powers of Nos. 3 and 4 would come into play and complete with ease the unfinished work of the artificial process. But events did not pass exactly as I anticipated. The annexed table shows the actual results. The weights, as before, are given in grams :—

Diet.	Initial weight.	Weight on 3rd day.	Weight on 5th day.	Weight on 7th day.	Weight on 10th day.
Natural milk	No. 1 5—514	551—gain 37	570—gain 19	593—gain 23	618—gain 25
	„ 2—538	900— „ 62	936— „ 36	093— „ 57	1063— „ 70
Half-peptonised milk	„ 3—526	693— „ 67	687—loss 6	681—loss 6	693— „ 12
	„ 4—562	645— „ 83	638— „ 7	648—gain 10	683— „ 35

No interval was allowed to elapse between the two sets of experiments, so that the initial weights in the second set are the same as the terminal weights in the first set. The abrupt alteration in the diet of Nos. 3 and 4 produced a marked disturbance in their nutrition. But there was no declension in their general well-being, and they continued to take their modified diet with the same avidity as before. In the first three days Nos. 3 and 4 showed an unusual increase of weight—an increase quite out of proportion to that of their companions. Then came a check; in the next four days they not only showed no gain, but showed even a slight loss of weight. In the last three days they began to gain weight again, and were evidently recovering from the temporary check caused by their change of diet. The explanation of this series of events which has presented itself to my mind is the following, but I by no means wish to lay stress on its accuracy :—It seemed as if the enforced rest imposed on the digestive organs for a period of twenty days, during the use of fully pre-digested food, had temporarily diminished their natural vigour—just in the same way as the disuse of a limb diminishes for a time the strength of its muscles. During this first period, immediately following the change of diet, the unemployed digestive powers were suddenly called upon to resume their wonted activity; but, owing to their enfeeblement from disuse, they were unable to respond to the call with due promptness, and undigested materials accumulated in the intestine. This accumulation accounted for the unusual increase in weight during the first period. During the next period the digestive embarrassment made itself felt, and gave a check to the processes of growth and nutrition, and the animals ceased to grow and gain weight. During the last period the temporary enfeeblement of the digestive organs was passing away, in proportion as renewed exercise was restoring them to their original vigour, and growth and increase of weight again commenced.

Whether this explanation be trustworthy or not, the lesson indicated by it is probably a true one—namely, that, except in extreme cases, when the digestive power is wholly lost or in complete abeyance, it is more advantageous to use a food which has been subjected to partial artificial digestion than a food in which the process has been carried out to completion. If the patient possess any digestive power at all, it is better that that power should be kept in exercise than that it should be permitted to deteriorate still further from total disuse. This is in agreement with the rule we apply in other cases of enfeebled function, according to which we endeavour to combine partial rest with moderate exercise.

Clinical Experience of Peptonised Food.

The extreme difficulty of arriving at reliable conclusions in regard to the effect of therapeutical agents is well known to every sober-minded inquirer. The difficulty is not less, but probably greater, in judging of the effects of dietetic means. I have now had a considerable experience, extending over a period of two years, of the use by invalids of peptonised milk and peptonised milk-gruel, and it would be an easy task for me to recite a string of cases in which improvement and recovery followed the use of these articles of diet. But evidence of this sort would be wholly delusive unless checked by such an analysis of the circumstances of each case as would enable me to isolate the influence of the dietetic means. In the immense majority of cases such an analysis would be obviously impossible, the conditions to be taken into account would be too numerous, and their relative influence too difficult to determine. In a question of this kind one is obliged in a large degree to fall back on general impressions and on deductions based on physiological considerations. Nevertheless, there are certain cases—most of them cases of incurable disease—in which the conditions are sufficiently simple to permit direct trustworthy conclusions to be drawn.

I found that peptonised milk-gruel was generally preferred, as being more agreeable to the palate, to simple peptonised milk; and by far the larger number of my observations were made with the former preparation. I was also soon satisfied that, with most rare exceptions, peptonised milk-gruel was perfectly acceptable to the invalid's stomach, and that a diet composed exclusively of this article could be used for many consecutive weeks without the slightest sign of failure of nutrition.

The cases in which the use of peptonised aliment appeared to produce the most striking benefits were those in which complete anorexia prevailed, and those in which the stomach was intolerant of food, and immediately rejected every form of nutriment. A brief review of the results obtained in cases of this kind will, I think, prove instructive.

Uræmic Vomiting.—In advanced Bright's disease incessant vomiting is sometimes a distressing and intractable symptom. In some cases of this class I have seen the vomiting at once and permanently allayed by the use of peptonised milk-gruel. The downward course of the disease may not have been a moment checked, but the relief to the dying patient was great.

Gastric Catarrh.—That form of gastric catarrh which is the Nemesis of alcoholic excess often yields immediately to the use of peptonised food. In the later periods of cirrhosis there frequently prevails severe intolerance of every kind of food—the stomach rejecting even beef-tea and diluted milk in the smallest quantities. The relief afforded by the use of peptonised milk-gruel in some of these cases is most striking—the vomiting ceases almost from the first, and the intolerable sense of distension diminishes.

Crises of Cardiac Disease.—Persons suffering from cardiac dilatation and valvular incompetency usually encounter one or more crises which are susceptible of relief before finally succumbing to their disorder. These crises are marked by a general venous stagnation, with severe congestion of the lungs, liver, and kidneys, and rapidly rising dropsy. Associated with these symptoms there is generally almost complete inability to take food, and sleeplessness. In this condition I have seen marked relief follow the use of peptonised aliment. I have long observed, as I doubt not have many of you, that the condition here described is often alleviated in the most striking manner by the use of exclusively liquid nourishment—such as milk or milk-gruel, given in small portions sub-continuously, or sippingly, as it were, throughout the waking hours—the patient being never permitted to take a distinct meal, nor a particle of solid food. As my practice has been to direct, in cases of this class, the administration of the peptonised aliment in this sipping fashion, the gratifying results noted have been partly due to the mode of administration; but I have been convinced by more than one example, when the same liquid nourishment, in the natural and in the pre-digested condition, has been used in succession, that there was a distinct superiority in the pre-digested article.

Pernicious Anæmia.—In the earlier periods of this singular disorder, I am inclined to hope that pre-digested aliment may prove a valuable resource. In cases where the ailment,

although fully declared, was still of comparatively recent origin, I have, in the last eighteen months, seen the disorder checked under the use of peptonised milk-gruel. In one case, owing to the irritability of the stomach, the milk-gruel was at first administered per rectum with pancreatic extract, but was afterwards tolerated by the stomach. In three of these cases the amelioration went on to complete restoration. In cases of longer standing I have failed by the same means to obtain the slightest improvement.

Gastric Ulcer.—The use of an exclusively liquid nourishment given sub-continuously, in the manner before indicated, is a well-known and most efficacious mode of treatment in these cases. But since adopting the plan of giving peptonised milk-gruel, I think I have perceived that the results were distinctly better than before, especially in cases associated with epigastric pain. The almost absolute rest procured by this food for the ailing organ appeared to be an additional advantage. I may be permitted to mention one case. The patient had suffered from copious and repeated hæmatemesis, and from severe epigastric pain. The irritability of the stomach was such, that the simplest nourishment, given in the smallest quantities, was immediately rejected. Peptonised milk-gruel was, however, tolerated at once; vomiting only occurred two or three times during the first two days of the treatment, and then ceased, as did likewise the epigastric pain. This patient used no other food for a period of six weeks, and took daily from two to three quarts, with steady recovery of flesh and strength.

Pyloric and Intestinal Obstruction.—Peptonised aliment would appear to be especially suitable for use in these cases, but so far I have been somewhat disappointed in the results. The vomiting has generally been effectually controlled, but I have not been able to convince myself, in cases of pyloric stricture, that the fatal event was delayed even a single day. When the obstruction has been temporary, and due to a removable cause, the results have been of course more satisfactory.

I should be glad to see a further trial made of peptonised, or partially peptonised, milk in the gastric and intestinal catarrh of infants. In one severe case of this class a favourable result was immediately obtained; in another case, there was greater tolerance of food, and more comfort after it, than with the use of simply diluted milk. It would be interesting also to have experience of the use of peptonised aliment in typhoid fever, and in old age. The greater variety which can now be given to this form of food, by the preparation of peptonised soups, jellies, and blanc-manges, will obviate the monotony sometimes complained of under the continuous use of peptonised milk-gruel.

The Use of Pancreatic Extract as an Addition to Food shortly before it is Eaten.

The administration of pancreatic extract with, or immediately after, a meal can, I think, have only a limited utility. On entering the stomach the pancreatic ferments encounter the acid of the gastric juice, and when this rises above a certain point the activity of the ferments is destroyed. Still, a not inconsiderable interval of time must elapse before this point is reached, and during this interval the pancreatic ferments can accomplish a certain amount of work. I have repeatedly administered pancreatic extract in this way, but I am unable to say positively that I have seen benefit from this mode of administration. There is, however, a modification of this plan, which I have lately put in practice, that promises better results. It is to add the extract to the food fifteen or twenty minutes before it is eaten. Certain dishes commonly used by invalids—farinaceous gruels, milk, bread-and-milk, milk flavoured with tea or coffee or cocoa, and soups strengthened with farinaceous matters, or with milk—are suitable for this mode of treatment. A teaspoonful or two of the liquor pancreaticus should be stirred up with the warm food as soon as it comes to table. And such is the activity of the preparation that even as the invalid is engaged in eating—if he eat leisurely, as an invalid should do—a change comes over the contents of the cup or basin: the gruel becomes thinner, the milk alters a shade in colour, or perhaps curdles softly, and the pieces of bread soften. The transformation thus begun goes on for a time in the stomach, and one may believe that before the gastric acid puts a stop to the process the work of digestion is already far advanced.

This mode of administering pancreatic preparations is simple and convenient. No addition of alkaline is required, and, of course, no final boiling. The only precaution to be observed is that the temperature of the food, when the extract is added, shall not exceed 150° Fahr. (65°C.). This point is very easily ascertained, for no liquid can be tolerated in the mouth, even when taken in sips, which has a temperature above 140° Fahr. (60° C.). If, therefore, the food is sufficiently cool to be borne in the mouth, the extract may be added to it without any risk of injuring the activity of the ferments.

Pancreatic Extract as an Addition to Nutritive Enemata.—Pancreatic extract is peculiarly adapted for administration with nutritive enemata. The enema may be prepared in the usual way with milk-gruel and beef-tea, and a dessert-spoonful of liquor pancreaticus should be added just before administration. In the warm temperature of the bowel the ferments find a favourable medium for their action on the nutritive materials with which they are mixed, and there is no acid secretion to interfere with the completion of the digestive process.

I have now had some experience of this method of alimentation, and have been satisfied with its success. In one case a patient suffering from post-pharyngeal abscess, which entirely occluded the œsophagus, was nourished exclusively for a period of three weeks (until the abscess broke) on enemata of milk-gruel mixed with pancreatic extract.

ORIGINAL COMMUNICATIONS.

A HUMAN HAIR CLIPPER.

By BALMANNO SQUIRE, M.B. Lond.,
Senior Surgeon to the British Hospital for Diseases of the Skin.

Most surgeons, but particularly those who have to dea specially with diseases of the scalp, are aware of the obstacles both as to a prompt diagnosis, and equally as to the treatment of those affections which are presented immediately or indirectly by the hair. Often the inextrcable felt which is composed of hair matted with dried-up discharge prevents the inspection of the actual cutaneous lesion (the raw surface), which is in itself the most characteristic basis for diagnosis, although, of course, the appearances presented by the scab itself are by no means without value. Thus it becomes often difficult to pronounce on the important issue as to whether the disease be, for example, of syphilitic or non-syphilitic origin, and so the surgeon is unable at a first interview to frame even a diagnosis, and still less to determine on a course of treatment. He is driven, as a rule, to direct first that the hair should be cut short so far as the scabs may permit; then that the denuded scabs should be softened by poulticing or assiduous bathing till they can be removed; and, lastly, that the disentangled hair that then remains should be again closely clipped. These necessary requirements are a disadvantage in many ways. The patient finds his expectation of immediate assistance deferred, and he finds it also a matter of considerable difficulty to engage the services of any hair-cutter on account of the disgust occasioned by the condition of his scalp, and the vague association in the public mind of contagiousness as a necessary property of skin disease in general.

It would, therefore, be a convenience if the surgeon could—at least in many instances—himself remove by some expeditious means, at once, the hair cleanly and thoroughly, and with it, if possible, at the same time, the incrustations themselves. Such a convenience as this is, as I imagine, quite attainable by means of a suitable modification of the ordinary well-known horse-clipper, which I have attempted to adapt to this purpose. The instrument that I have to recommend, and the construction of which I have already altered a good many times, has at length presented itself to me in a form which, I believe, is quite practically useful. It not only cuts off the hair closely, but it cuts it so very closely, and yet so safely (as to the avoidance of any injury to the raw skin), that it takes off very cleanly and conveniently not only the hair, but the scab itself with the hair. I may mention here that as to cases of ringworm also the hair-clipper is specially useful. It not only discloses, at first view, a complete map of the exact extent of th

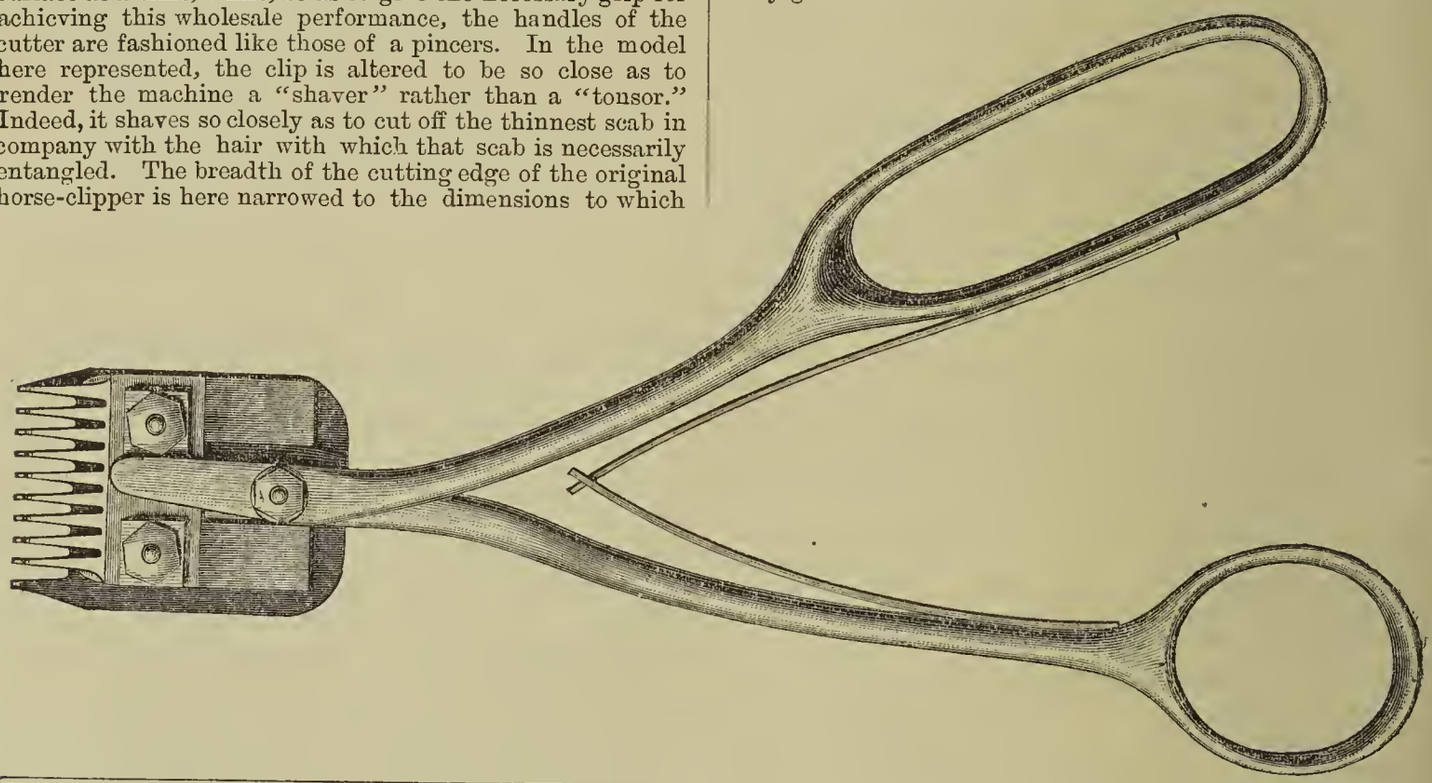
disease—an important advantage,—but it enables the surgeon himself to secure, just at such intervals as he would probably think necessary for inspecting the case from time to time, that one of the most important conditions of the treatment of ringworm (frequent shaving) should be rigorously observed.

The operation of shaving the scalp by means of the clipper—quite securely, in the case even of infants—will not occupy the practitioner more than, at the most, three minutes.

The illustration (which represents the instrument full size) will explain very clearly the construction of the instrument.

It may be necessary to point out the special modifications of the horse-clipper which have been found essential in this adaptation of it. It may be premised that the horse-clipper itself was a mere, and comparatively recent, adaptation of the American reaping machine, which was so startling a feature in the Great Exhibition of 1851, as those who are old enough will well remember. Now, the horse-clipper cuts only close enough to produce the convenient tonsure of a well-groomed horse, and, for the sake of expedition in its use, its toothed edge is broad so as to travel over a large surface at a time, while, so as to give the necessary grip for achieving this wholesale performance, the handles of the cutter are fashioned like those of a pincers. In the model here represented, the clip is altered to be so close as to render the machine a "shaver" rather than a "tonsor." Indeed, it shaves so closely as to cut off the thinnest scab in company with the hair with which that scab is necessarily entangled. The breadth of the cutting edge of the original horse-clipper is here narrowed to the dimensions to which on trial it has been found necessary to restrict the instrument as a shaver of the boldly convex surface of a child's head. The forceps arrangement of the handle has been altered to the form of the scissors-handle, as being more handy, and also as a convenience rendered possible by the less work at a grip which the narrower cutting edge requires. The conformation of this scissors-handle has been adapted to the tailor's "cutting out" pattern of scissors, for the reason that, on inquiry of grooms accustomed to the use of the horse-clipper, and also as the result of personal trial, it became clear that the use of the clipper here pourtrayed would without such facility prove itself too fatiguing for ordinary service. The hair-clipper as adapted by myself can be procured of the original inventor of the horse-clipper, Mr. Adie, optician, of 15, Pall-mall, at the cost, as I understand, of twenty-five shillings.

I have to thank Mr. Adie for the obliging pains he has taken in constructing under my directions a model which fully represents my views. I learn from him that he has appointed Messrs. Weiss and Son, surgical instrument-makers, of 62, Strand, London, as his agents for supplying the instrument to any practitioner who may desire to procure it. For my own part, I have found the contrivance a very great convenience.



POUGUES-LES-EAUX.

By J. BURNEY YEO, M.D., F.R.C.P.,
Physician to King's College Hospital, etc.

An autumn vacation devoted to visiting some of the spas of Central France and the Pyrenees took me in the first instance to Pougues-les-Eaux. I must own that I had never heard of this place until a medical friend with whom I was talking on my projected tour said, "You must be sure and visit Pougues"; and as I believe many English medical men *are* as ignorant of the existence of Pougues as I *was*, I venture to give a very brief account of my short stay there.

In the first place, my thanks are especially due to Dr. Janicot, the *médecin consultant* at Pougues, for the great courtesy and kindness with which he devoted himself to my service, and enabled me, in the very short period of time at my disposal, to gain a considerable knowledge of Pougues and its interesting environs. Pougues-les-Eaux, in the department of the Nièvre, is 241 kilometres from Paris, or about five hours by rail, on the same line by which one reaches Vichy. It is but thirteen kilometres from the old historic town of Nevers. It is finely situated in a charming valley in undulating hilly country, dominating the right bank of the river Loire. The Établissement des Bains is surrounded by a large and well-wooded park, which affords admirable promenades for the visitors to this spa. Though Pougues is essentially a quiet resort, and contrasts greatly, in this respect, with its gay and fashionable neighbour, Vichy, yet it is well provided with those aids to passing the time which few French people care to be without. It has its *salle de bal* and *salle de spectacle*, *salle de lecture*, *de jeu*, etc.

However, as I have already said, the repose and quiet of Pougues is one of its chief characteristics, and it is resorted to on that account by those who desire to avoid the excitement and frivolity of Vichy. At Pougues, as at most other places of the kind, the springs are utilised both for bathing and drinking, and a small but well-ordered bathing establishment provides baths and douches of all kinds, which are administered by skilful attendants according to the wishes and directions of the physician in charge.

There are three principal springs, named the St. Leger, Bert No. 1, and Bert No. 2.

The composition of these springs makes them fall under the head of mild alkaline waters (bicarbonate of soda and lime) which contain a small amount of iron.

The following table gives the composition of the principal spring (the St. Leger) in grammes per litre:—

Carbonic acid, free	1·3190
„ „ in combination	1·6692
Hydrochloric acid	0·1271
Sulphuric acid	0·1098
Silica	0·0250
Oxide of iron	0·0120
Lime	0·6400
Potash	traces
Soda	0·4776
Organic matter	0·0320
Lithia	traces

Many eminent French physicians have testified to the value of these waters in certain cases—Trousseau, Durand, Fardel, Bazin, Grisolle, Gallard, Guérin, and many others,—and the cases they mention as likely to derive benefit from the course at Pougues are those of dyspepsia with gastralgia (which are stated to do better here than at Vichy, and to tolerate these waters better than those of Vichy), in intestinal catarrhs, in chronic cystitis, in phosphatic gravel with catarrh of the urinary passages, in nephritic colic, and also in biliary colic from the presence of gall-stones. They are also stated to have proved very valuable in cases of chronic metritis, especially where this has been associated with dyspeptic symptoms. The presence of a small but definite quantity of iron in these springs renders them available also to combat the anæmic complications so constantly found to co-exist with chronic maladies.

When I add that they have proved of service in cases of visceral gout and rheumatic neuralgia, as well as in cases of diabetes, I think I have nearly exhausted the list of chronic ailments to which the waters of Pougues are applicable.

I must not, however, forget to add that the visceral derangements which follow exposure to malarious influences are said to be specially amenable to treatment by the waters of Pougues.

Pougues-les-Eaux is by no means a new health-resort. It has quite a venerable and distinguished history, and the walls of the *salle de lecture* are hung with portraits of the notables who have from time to time patronised it. These include Henry III. and Catherine de Medici, Henry IV., Louis XIII., and Louis XIV.; the Prince de Conti, who built himself a house there; and amongst literary celebrities, Adam Billaut and Jean Jacques Rousseau.

Having thus briefly introduced Pougues-les-Eaux to the attention of those who were previously unacquainted with it, I will conclude by again remarking that it is in the direct route to Vichy, and therefore may be easily visited by those who are on their way to the latter place.

The New Chair of Pathological Anatomy at the Paris Faculty of Medicine.—It is said that as the result of a long conference between M. Ferry, Minister of Public Instruction, and the Committee of the Professors of the Faculty, the project of founding this new chair will be abandoned by the Minister, while satisfying the wishes of those who think (among whom is Prof. Charcot) that the teaching of pathological anatomy may be rendered complete by utilising the zeal, merit, and competence of the *agrégés*—a solution which would satisfy everybody, except, as we may well suppose, him who has said, "I must have it all."—*Union Méd.*, May 8.

Lady Visitors in the Paris Hospitals.—That restless body the Paris Conseil Municipal has recently been discussing the propriety of excluding the lady visitors from the Paris hospitals, on the plea that religious propagandism, not charitable aid, is their chief object. In reply, the Secretary of the Hospital Administration states that any lady who wishes to aid by her presence in the hospitals is admitted, irrespective of her religious persuasion; and, in fact, among the present 150 visitors there are fifty Protestants and some Jewesses. These visits are a great comfort to the unfortunate patients, many of whom have no friends or relatives. The *Progrès Medical* (May 8) observes that exclusion on the ground of religious opinion is impossible; and it only wishes that the circle of ladies undertaking the office of visitors could be widened. "It is a noble mission of charity, hope, and consolation, and much should we like to see it adopted by the wives of the physicians and surgeons of hospitals and of the professors of the Faculty. It is for them to furnish the example, which would most certainly be followed."

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

KING'S COLLEGE HOSPITAL.

CASES IN MR. LISTER'S WARDS.

Gelatinous Degeneration of Knee-joint.

May 10.—Patient, a young man of strumous appearance, was brought into the theatre. He had considerable swelling of the right knee-joint, and to the outer side there could be felt some fluctuation. The history of the case indicated the existence of inflammation in the joint, and the presence of material likely to set up further mischief if let alone. Mr. Lister proposed to open the joint under the spray and examine it, removing, if necessary, with a scoop any degenerated tissue which could be got at. He remarked that in this, as in other antiseptic operations, it was necessary that extreme care should be observed, so that not the slightest particle of impure material should get into the joint. It frequently happened that a knife or drainage-tube or other instrument got contaminated in passing from the carbolic solution in which it lay to the surgeon's hand. The smooth blade of a knife, for instance, would not hold the particles of the carbolic fluid, and if it lay about the table or fell on the floor it was easily made impure. The patient being anæsthetised, Mr. Lister then made an opening a little above and to the outer side of the patella, and another on the same side somewhat lower down. Some half-formed pus and fluid matter escaped, and some softened material was then scooped out with a sharp spoon. There was little bleeding during the operation, and a small drainage-tube of red vulcanite (preferred as containing no free sulphur) was introduced; the limb was then dressed and placed on a Gooch's splint.

May 21.—A few days after the operation, while the limb was being dressed, a blood-clot as large as a hazel-nut was removed from the wound; this was followed during the next twenty-four hours by sharp bleeding, which was checked with some difficulty. Patient is now somewhat anæmic, but in other respects the case has gone on well. Mr. Lister remarked that there existed some doubt as to the actual cause of the hæmorrhage, secondary hæmorrhage usually coming on in such cases from the destructive effects of an abscess; but here there had been no pus, and the wound had remained sweet and clean. The loss of blood could not be looked upon as a serious accident; in fact, formerly, blood-letting to a much larger extent would have been part of the routine treatment of such a case.

Strumous Abscess of Neck treated with the Scoop.

May 21.—A young girl was brought into the theatre suffering from a strumous abscess and glandular enlargement in the left submaxillary region. The abscess was ready to open, and his treatment here was to open it and to scoop out as much of the degenerated material as he could get at. With the usual antiseptic precautions, Mr. Lister then opened the abscess, and with a sharp spoon removed a quantity of softened material. Some of the deeper glands were also affected, and as these would soon have suppurated if left alone, they were also removed piecemeal. Mr. Lister said that it seemed a deal of trouble to take with such a case, but it was probably well spent. If the abscess had been simply opened, the wound might go on discharging, and be a constant drain on the patient for an almost indefinite time, besides being offensive and troublesome. Even where one gland only was affected, the case was always tedious, but, as in this instance, where many of the deeper glands were involved, he had found that they were much better to be thus dealt with. Another thing worth noticing was that the wound here was in great part a contused one; but such a wound, if putrefaction were avoided, would heal quite as well as a clean-cut one. As he avoided putrefactive changes by the use of antiseptics, what would in other circumstances be inadmissible treatment was now admissible. In dressing the wound great care had to be taken with the fastening of the bandages, as from the movements of the head on the body there was a great liability of the dressings being

moved; an elastic bandage was therefore used in addition to the ordinary gauze bandages.

Stricture of the Rectum with Fistulæ and Piles.

May 21.—Patient was a middle-aged woman, and considerably emaciated. In commenting on her case, Mr. Lister pointed out that, as here, diarrhœa was in reality often a sign of stricture of the rectum. He had known cases where all the ordinary means to check diarrhœa had been tried, and where after death the gut had been found so contracted that the wonder was that the patient had managed to live for any length of time. In these cases the only chance of the patient's life lay in keeping up the liquid form of the stools, and wherever there was a probability of syphilitic or other form of stricture, and diarrhœa was present, a careful examination per rectum should be made. In the case under notice it was found on examination that the whole region of the anus was riddled with superficial sinuses, and the question arose as to the use of any operation; but he thought that no harm could come of laying open all the fistulæ, and giving them a chance to heal up. The most formidable of these passages was one anteriorly leading into the vagina, but as this was superficial to the sphincter and only the integument was involved he would slit it up along with the others. It was of course useless in such a case to use antiseptic treatment, as fæcal matter was essentially septic and rich in bacteria, but he would, nevertheless, mop the cut surfaces with a solution of chloride of zinc, forty grains to the ounce, which was useful in preventing putrefaction for two days or so.

UNIVERSITY COLLEGE HOSPITAL.

SEVERE BLEEDING FOLLOWING SLIGHT INJURY TO THE LEG.

(Under the care of Mr. BERKELEY HILL.)

[From notes by Mr. Dixon, Ward Clerk.]

James C., aged fifteen years, was admitted on April 15. While out walking on the evening of the 11th he fell, and struck his shin-bone sharply against the kerbstone. The part struck bled rather freely at the time, and patient got a lotion from a medical man for it. This failed to stop the bleeding, and on the 13th, patient came as an out-patient, and had the leg firmly bandaged. Two days later, the blood still oozing from the wound, patient was taken into the hospital.

April 15 (on admission).—There is a wound over the crest of the right tibia, about the middle of the shaft. Here there is a projecting tumour about the size of a walnut. This swelling has the appearance of a blood-cyst formed by the pushing forwards of a layer of fascia by effused blood; it is tender and fluctuating, but does not pulsate. The skin around the wound is red and tender, and, on pressure, pus exudes between the edges of the skin and the cyst. The leg generally in that region is swollen and tender; the anterior tibial can be felt pulsating as usual. There is no previous history of hæmophilia, but patient says he has a brother who bleeds for a week when he has a tooth removed, and who has frequent epistaxis. Ice-water was freely poured over the wound, the limb was bandaged and slung in a cradle, but notwithstanding this blood still continued to ooze out.

19th.—To-day the wound has been exposed to the air with the hope of checking the bleeding by the formation of a blood-clot. Other means have quite failed.

21st.—The wound is now almost twice the size it was on admission, and in the centre is a large mass, apparently of blood-clot. During the day, patient, being under an anæsthetic, and an elastic bandage being put round the limb to control hæmorrhage, Mr. Hill removed with his fingers a handful of clot and broken-down tissue. The wound was then sponged with one-in-forty carbolic solution. On removing the bandage no vessel was seen to spurt, but there was general oozing, both venous and arterial. The front of the tibia was bare for a distance of an inch and half in length and half an inch across. The internal saphenous nerve was lying exposed. It being impossible to apply ligatures, the actual cautery was applied, but with imperfect success. The wound was then stuffed with lint soaked in strong perchloride of iron solution, cotton-wool put over it, and the limb then firmly bandaged from the toes to the groin. This effectually controlled the bleeding. After the operation patient was in great pain, and morphia hypodermic injections were given.

27th.—To-day patient disturbed the dressing, and fresh hæmorrhage set in. On examining the wound, the upper three-fourths of it was found to be covered with slough, the blood coming from the lower part. Irrigation with cold water was tried, but this seemed to increase the bleeding, and strong perchloride of iron solution was again tried.

28th.—At 12 midnight the blood had again soaked through the bandages, which were then taken off and reapplied. At 2 a.m. blood was still oozing through, and again at 11 a.m., after fresh dressings had been applied. At 2 p.m. patient was taken into the theatre, and an unsuccessful attempt was made to tie a small artery. The wound was then plugged with lint steeped in turpentine, and the limb firmly bandaged.

30th.—To-day, on examining the wound, the whole surface was found to be very clean and healthy. There was very slight hæmorrhage from two points—one near the lower end of the exposed bone, the other near the lower margin of the wound.

May 4.—The surface of the wound still keeps healthy, and patient's general health is fairly good.

14th.—The wound is now healing nicely. A small spiculum of bone has been removed from the uncovered surface of the tibia. The turpentine dressing is still continued.

26th.—Patient is still in the hospital, and the wound is healing well. A little hæmorrhage occurred to-day.

Local Anæsthesia with the Bromide of Ethyl.—M. Terrillon stated at the Société de Chirurgie that he had employed the bromide of ethyl about a dozen times in operations with the thermo-cautery. In a minute or two a white patch indicating cutaneous anæsthesia is produced; and on the pulverisation being continued, insensibility of the tissues is produced to the depth of two centimetres. The production of the white patch is not essential, as anæsthesia may exist when it is absent. The results have proved very satisfactory; but in two cases M. Terrillon did not succeed, owing, as he believes, to the pulverisators which he employed having too small a jet.—*Gaz. Méd.*, May 15.

Solution of Salicylic Acid.—Dr. Springer states (*Louisville Med. News*, May 1) that salicylic acid is very ready soluble in carbonic seltzer or Vichy water, the latter, containing an excess of alkaline carbonates, being preferable. The acid should be put in the tumbler first and mixed thoroughly with a small quantity of water, as it is very apt to float at the top, and then the glass filled and drunk off. Small doses will dissolve in a tablespoonful of the water. When perfectly dissolved it has a very pleasant, exhilarating, pungent, and sweetish taste. These waters will also form perfect solutions of sulphate of quinia and other cinchona salts, making these solutions very palatable and disguising a great deal of the bitterness when drunk quickly before the excess of carbonic acid has escaped. This excess of carbonic acid is the solvent for the salicylic acid and quinine.

Oxalate of Cerium as a Remedy for Cough.—Dr. Andrew Smith reported to the New York Therapeutical Society the results of an inquiry which had been based upon eighty-four cases presented by various observers. The conclusions are—1. Oxalate of cerium can be safely administered in doses of ten grains, three times a day, for many days in succession. 2. The only unpleasant symptom was slight dryness of the mouth that appeared after several days. 3. It is probably most efficient when administered dry upon the tongue. 4. Its effects were not produced until two or three days after its use was begun, and lasted for two or three days after the remedy was discontinued. 5. It was most efficacious in the treatment of chronic cough, and the initial dose should be five grains. 6. In the majority of cases it had not proved an efficient cough medicine for any considerable length of time, but could be regarded as a valuable agent to be employed in alternation with other emedies. 7. It did not disturb the stomach; on the contrary, it relieved nausea and improved digestion. 8. Different preparations in the market are not equal in value, and when success is not obtained by one, another should be substituted.—*New York Med. Record*, May 1.

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Medical Times and Gazette.

SATURDAY, MAY 29, 1880.

THE PROPOSED FIRST YEAR'S EXAMINATION AT THE COLLEGE OF SURGEONS.

The following resolutions, moved by Mr. Marshall and now adopted by the Council, are in themselves so very extraordinary that they demand the most careful consideration. It is not very likely that they will now be rejected, but surely the College had evil counsellors when they were adopted. They run as follows:—1. "That, under the powers given by Section 14 of the By-laws, the Council do proceed, as soon as is practicable, to institute an examination in elementary anatomy and physiology, and in such other subjects as the Council shall from time to time determine, to be passed by candidates for the Membership of the College at or after the expiration of their first year of study." 2. "That it be referred to the 'Committee on Examinations in Anatomy and Physiology' to prepare, and submit to the Council for approval, the necessary regulations for defining and conducting such examination." 3. "That it be referred to the Committee on By-laws to prepare the revised or new formulæ which will be required for the re-arrangement of the payment of fees, by the institution of such examination.

Now, as pointed out by a "Teacher" last week, the Council hereby put themselves in a dilemma. By the present rules and regulations all students are required to attend certain classes, and these are usually taken in a certain order—chemistry, anatomy, and physiology the first year; botany and materia medica, at least, during the first summer. Provision is made in the rules and regulations for attendance on these courses; but hitherto examination on them has been ignored at Lincoln's-inn-fields. Now there is a prospect of the College examining men upon them, and they ought to have due recognition. How is this to be done if every man is to be tied down to anatomy and physiology during his first year's study? But besides, the College only insists on one year's study in physiology, and that would mean that the first winter session must be that given to it, or that there must be two winter sessions given up to the study of this subject as heretofore has been the case, with, in addition, an extra course of practical instruction. Anyone who is practically acquainted with the modern system of tuition must see that either these fresh regulations with regard to a new examination must be overlooked, or that any attempt to give a sound instruction in the other subjects must fail. We honestly believe that Mr. Marshall, who moved the resolutions, was influenced by a profound interest in the real education of the medical student, but we are just as certain that he has taken a wrong course. Elementary anatomy is not easily defined, still less is elementary physiology, unless we confine it to the subject of Mr. Marshall's lucubrations on the sheep's tongue, or to a certain production signed by a lecturer and examiner at the College to which we hope to refer on a subsequent occasion. If the Council want to promote the interests of sound medical education they will speedily reconsider the whole question. It is good that men should work in their first year, but it is not good that they should be forced to attend to elementary anatomy and physiology wholly and solely to the detriment of their other studies. Examination is good, but over-examination is bad, and few who are not intimately acquainted with students and their ways know the anxiety and worry which attend all examinations where such a thing as public rejection is possible.

THE SALICYLATES IN ACUTE RHEUMATISM.

There can be no doubt but that the two papers by the President of the Clinical Society, read before the Society, and elsewhere published in abstract, are of the very greatest importance. Dr. Greenhow's care and caution as an observer and his clinical experience assure us that the facts presented will be rigidly accurate, that his reasoning will be sound, and his conclusions safe. With regard to the first paper, on salicin, we need say little, inasmuch as the much more manageable salicylate of soda is nowadays universally employed; and being both cheaper and more readily obtainable, whilst apparently it exercises similar influence over certain of the factors of acute rheumatism, it deserves the more careful consideration given to it by Dr. Greenhow.

As regards the effects of salicin, the author sums up his opinions thus:—"The effects of the drug were not very satisfactory. The temperature appeared to be reduced, and the pains to subside, in the uncomplicated cases; but in Cases 1, 2, 4, and 6 relapses occurred when the salicin was either discontinued or the frequency of the dose diminished. Case 5, one of relapse, had already been laid up some time, and recovery might have been as rapid under simple rest and diet; while in Cases 9 and 10, complicated with pneumonia, the salicin did not appear to exert any influence on their progress. On the other hand, salicin appeared to produce some inconvenient consequences—in one case, epistaxis, which recurred when the dose was increased; in four cases marked cardiac depression; nausea and vomiting in two cases. Lastly, the detention of patients in hospital was not shortened by the treatment, for except Cases 3, 5, and 8, two of which were approaching their close when admitted, the patients treated with salicin recovered more slowly than is common in cases of similar severity under other modes of treatment."

Salicylate of soda is the subject of a most careful study, which we are sure our readers will gladly welcome, but we may be excused if we extract one or two of the leading points in the abstract which elsewhere appears in our columns. Moreover, it must be remembered that these are mere abstracts of papers of very great length. With the salicin only

ten cases were treated, with the salicylate fifty; consequently the latter must be by far the more important paper, even were we to take statistics only. Again, it is apparent that to the use of the salicylate Dr. Greenhow has devoted, we cannot say more care and attention, but we can say a more extended trial, than to salicin. Roughly, the paper might be divided into two parts: one abstractly therapeutical, or as some would say, physiological; the other is purely practical, and has reference to the action of the drug in the various cases where it was administered.

With regard to the physiological effects of the drug, Dr. Greenhow says:—"One of the most obvious effects of the treatment in the majority of cases was a speedy fall in temperature, sometimes within a few hours from commencing the treatment, and, save in a few cases, within two or three days. The pulse usually, but not invariably, came down in frequency with the fall of temperature. In forty-five out of the fifty cases certain well-marked physiological symptoms attended the reduction of the fever. There were effects on the nervous system, such as deafness, vertigo, headache, noises in the ears, delirium, and hallucinations. Deafness often occurred early, and was noticed in twenty-seven cases. Sometimes it was very intense. Vertigo occurred in fourteen cases. Very intense headache, chiefly frontal, though less frequent than deafness and vertigo, was, when it occurred, a much more distressing symptom. It was complained of in nine cases, and in one recurred until the resumption of the medicine. Delirium was present in eight cases; hallucinations in four. Great depression of pulse and action of the heart was the most important effect produced on the circulation—more or less weakening of the pulse calling for stimulants in almost every case; great weakening of the impulse of the heart, and in ten cases almost complete obliteration of the first sound; pulse irregular and dicrotous in some. Vomiting occurred in twenty-two cases; great injection of the tongue in many cases; soreness of the tongue in three; and an aphthous state of the tongue in three cases. Diarrhœa in two cases was evidently referable to the salicylate. Epistaxis occurred in seven cases. In two transient albuminuria was observed; in two others tremor of the hand or tongue, which may not have been due to the drug."

These constitute serious objections to the use of any drug, yet few will deny that salicylate properly handled is a remedy of very great value in the treatment of acute rheumatism, and Dr. Greenhow "fully admits the great immediate relief which appears to follow the use of these agents in the treatment of rheumatic fever." But he questions whether, on the whole, the salicylate treatment is successful. That, he says, must be tested by three considerations: the risk of complication, the condition of the patient on recovery, and the length of time the patient is disabled. In every one of these particulars, especially with regard to relapse, Dr. Greenhow's experience leads him, he says, to go against the use of the salicylate. It does not even prevent hyperpyrexia, though a most powerful antipyretic. It tends, says the author, to produce anæmia, and the patients treated by it are slow to regain health and strength. Finally, he observes, "With regard, therefore, to the treatment of rheumatic fever with salicin and salicylate of soda, we must, I think, come to the conclusion that most physicians did with regard to the treatment with blisters, viz., that the pain and distress of the patients are undoubtedly for a time greatly assuaged, but that the duration of the illness is not shortened. Of the two plans I am of opinion that blisters applied in the vicinity of all the painful joints are by far the most efficacious and speedy in the relief they afford, and have the advantage of not producing so much subsequent debility. Another question now presents itself for our consideration, namely, whether it is not possible that some injurious consequence may result from the powerful action of the medicine upon the heart; and I am bound to confess my fears that the marked weakening of the first sound of the heart, present in so many cases, indicates the exertion of an influence upon the muscular structures of that organ which may not always pass entirely away when the treatment is suspended, and more particularly when either inflammation of the endocardium or pericardium, or of the muscular structure itself, exists during the treatment."

Our impression is that with salicylate, as with many other things, men have rushed to extremes. They have overlooked the true use and value of the drug, which is evidently to lessen fever and diminish pain; but that being done, its work is accomplished, and something else should take its place. What that may be, will again be a question answered differently by different men. Some—happily, we trust, few in number—would look upon diet as of little importance, for in the discussion which followed the reading of the papers we find two men totally opposed to each other: one would give good diet; the other would be very careful—which means, practically, that the patient is to be mainly supported on what is sometimes described as low diet. But we are wandering away from the subject, the consideration of which cannot be thus cursorily dismissed.

By a curious coincidence, we have received, since the report was in type, the *Nordiskt Arkiv*, which contains an article on the very same subject, and from the *précis* it is evident that the author, whose experience is derived from the Hospital at Copenhagen, comes to conclusions very similar to those reached by Dr. Greenhow. We hope to give an abstract of the original next week, and shall then return to the subject.

VIRCHOW ON THE TRANSMISSION OF THE PEARL DISEASE OF ANIMALS BY DISEASED MEAT.

The diseases of our domestic animals are singularly neglected, as a rule, by the medical profession, and yet the medical profession, by its special education, might render great service to the country at large by paying a little attention to the ailments, especially the epidemic ailments, of our sheep and our oxen, and by diffusing sound pathological views among the farmers and landed proprietors with whom its members in country districts are thrown so much in contact. As long as man was considered a creature *sui generis*, it was all very well to regard him as a special object of study apart from all other animals; but in the light of modern science we are unable to consider him as more than a link in the long chain of organised beings with whom he is connected by an affinity of blood none the less real for being remote. Hence from the modern point of view the diseases of animals are of as great an interest to the scientific physician as the diseases of man. By studying the former we throw light on the latter; we may even be able to discover new modes of treatment by this study; in any case we may learn, what is of the greatest importance to the community, how we may best protect our flocks and herds from the ravages of epidemic disease, and to what extent the diseases of our domestic animals are transmissible to ourselves either directly or by using their flesh as food.

These few considerations may serve as an apology, if such be needed, for introducing into our columns the special subject of this article—namely, the experiments which Professor Virchow of Berlin has been engaged on during the last four years with the view of determining how far the affection of horned cattle known in Germany as pearl disease (*Perlsucht*) is injurious to human health if we eat the meat of the animals so diseased. At first sight it would have seemed an

easy thing to decide this question one way or the other, but practically the difficulties are almost insuperable. As Professor Virchow remarks in his lecture before the Berlin Medical Society (*Berliner Klin. Wochenschrift*, Nos. 14, 15, 1880), the attempt had already been made by Gerlach in 1869, and by Klebs in 1870, by both without arriving at a definite conclusion. The first difficulty met with in making a series of experiments on the effect of feeding presumably healthy animals with portions of the flesh, etc., of cattle affected with pearl disease, consists in distinguishing the true pearl nodules, especially in their earliest stages, from a variety of nodules which superficially resemble them, but really have nothing whatever in common with them. In the lungs of cattle, cheesy nodules, the residues of bronchitis with dilatation of the bronchioles and inspissated secretion, are very common. In the same way, portions of lung are constantly met with, which have been the seat of chronic peribronchitis and pneumonia, and which have become contracted, fibrous, and calcareous in consequence. All these changes have been confounded with pearl disease, from which they must, in future, be rigorously separated. Pearl nodules have been also, and still are, regarded by many authorities as of a tubercular nature, and the disease itself has been ranked with tuberculosis. We have to thank Professor Virchow for clearing our views on this point, and showing how little the pearl nodule of cattle has in common with human tubercle, save, perhaps, in one or two features of its microscopic anatomy.

The most common seat of the pearl disease of cattle is the surface of the serous membranes, especially of the pleuræ and peritoneum. Here outgrowths form, which are rarely miliary or sub-miliary, but soon become nodules the size of a pea, and by degrees acquire one or even several pedicles, and assume the aspect of polypi which soon become as large as potatoes, are often met with of the size of a man's fist, and in some cases attain that of a man's head. Anatomically, these nodules consist of collections of giant-cells, lying in a matrix of spindle-cells of the connective tissue type, and of small round cells resembling those of a lymphatic gland. Virchow long ago, in his work on Tumours, ranked the pearl nodules among the lympho-sarcomata, and he maintains this position still, in spite of the recent objections of Herr Schüppel to it, for Schüppel holds that the pearl disease is tubercular.

Now, putting aside their anatomical structure, Virchow points out how essentially these nodules differ from tubercles. They form tangible tumours; they steadily increase in size; instead of ulcerating they become firmer and harder from calcification the older they are.

The experiments on which Professor Virchow has been engaged for the last four years, by the direction of the Minister of Agriculture, were conducted on rabbits, guinea-pigs, cats, calves, goats, and sheep, and on a large number of pigs. Dogs were not experimented on, for, as Gerlach had already found, the dog is too little affected by any kind of food for it to be used for this sort of research. With all the above-named animals the same difficulty is encountered in deciding between real and false pearl disease as in the case of horned cattle. This is especially true of the pig, in whose liver nodules of a kind of granulation tissue are extremly common, as well as encapsulated cysticerci and echinococci, the latter occurring also in the lungs, and "assuming not unfrequently in both organs the aspect of tiny bodies surrounded with such strong capsules that they appear after the animal's death as independent nodules." In all these animals, too, small patches of what in man would be termed metastatic inflammation are met with, especially in the kidneys, even in animals apparently perfectly healthy, and which have not been submitted to experiment at all. But the list of difficulties is not yet exhausted. In the pig it is practically impossible to decide whether an enlargement of certain lymphatic glands, which is found on killing an animal that has been fed for a month or six weeks daily with a certain quantity of pearly substance, is due to infection by the latter or not. The enlargement cannot be detected with certainty during life, even in the submaxillary glands, which are the most superficial.

Further, when we come to compare the results obtained by feeding a number of young animals, even of the same litter, with the flesh or the milk of a cow with pearl disease, these results are by no means constant. It is not at all unusual for one set of lymphatic glands—the cervical, the inguinal, or the mammary—to be swollen and caseous, and for the others to remain healthy; and, what is still more annoying, these changes may also be found—at any rate in the pig—in animals that have not been experimented on at all. The perplexity of the experimenter becomes greater still when he finds that in an animal like the pig, which has enormously large Peyer's patches, the latter are *never* in the least diseased when it is fed on pearl substance, and that the mesenteric glands are often intact while the submaxillary are affected. If we understand Professor Virchow aright, he thinks that these glands would have been similarly enlarged whether the animals had been fed experimentally or not. Another curious fact which Virchow brings out is this: that if you feed a number of animals for a month or six weeks with pearl substance, the changes which are found at the post-mortem are only in the most exceptional cases of recent date; in the great majority they are relatively old and well marked. A series of changes are not present corresponding to different periods of the experiment, and Professor Virchow again doubts whether we have not to do with independent processes of disease. After what has gone before, our readers will not be surprised that the conclusion to which Virchow's experiments have at present brought him is rather indefinite. All he can say is that more sickly animals occurred among those experimented on than among the animals used for comparison, or, as far as very imperfect statistics go, among domestic animals as a rule. He holds that the prevalent suspicion that the products of pearl disease are injurious, is justified, and that the sale of animals known to be affected should be forbidden by the sanitary authorities. His experiments to determine whether the parts of the meat of such animals in which no actual pearl nodules can be detected may be safely used as food, have as yet given results only slightly bordering on suspicion, and he does not think the authorities would be justified in excluding such meat from the market in consequence. He has also conducted a series of experimentf on animals with decomposing meat, to see whether the changes met with in the former experiments with pearl substance might not be due to "a more general state of alteration" in the flesh and organs with which it was associated; but here the results were almost absolutely negative, and no changes occurred which could be considered analogous to those made with pearly meat. Experiments with the milk of cows with pearl disease were also unsatisfactory, and require to be carried out on a much more extended scale. Some cows suffer from a pearly disease of the udder, and their milk is the most likely to be injurious to other animals. On the whole, Professor Virchow considers that the assumption of a special virus of pearl disease is at present without any scientific basis. It is absolutely certain that the affection has never been transmitted from animals to man; and how it is transmitted from animal to animal, if such transmission occurs, seems at present quite inexplicable. Professor Virchow is of opinion that the direction which researches on this subject must follow for some time is that of determining what changes can be produced in the bodies

of our domestic animals by dieting them with all kinds of decomposing or damaged articles of food (*verdorbener Nahrungstoffe*).

One thing is clear, that these researches on animals require to be conducted by men of high scientific acquirements and pathological knowledge. For their successful accomplishment indomitable patience is needed, and the faculty of rigidly sifting the results obtained. These qualities Professor Virchow possesses in a remarkable degree, and those who would follow in his footsteps should study his method as brought out in the investigation we have briefly summarised.

THE WEEK.

TOPICS OF THE DAY.

Referring to the forthcoming International Conference on Hygiene, to be held in Turin early in August next, the *Times* says an official publication of twenty folio pages, in Italian and French, has been issued by the authorities, explaining the arrangements already made. The conference is to last a week, but the exact day of opening is not yet fixed. At the conference held in Paris, in 1878, it was decided to hold a congress in Turin in 1880, and the Società d'Igiene di Torino has undertaken its organisation. The co-operation of the town officials has been readily given, and a grant of 10,000 frs. has been voted towards meeting the expenses. The Ministers of the Interior, of Foreign Affairs, and of Education have promised their assistance, and the King has graciously consented to become the patron. Foreigners are especially invited to attend, and it is stated that although French is generally regarded as the official language of international congresses, yet addresses may be given in any language, and they will be translated and published in French and Italian. The general scope of the Congress is to be the same as that held at Brussels in 1876, and at Paris in 1878, but all matters of detail are left for decision until the Congress actually meets. Professor Hyacinthe Pacchiotti, Rue Saint François de Paul 25, Turin, is ready to receive the names of those interested in the Congress, and to send information. As at present arranged, the sections will be as follows:—1. General and International Hygiene; 2. Domestic Hygiene; 3. Professional Hygiene; 4. Hygiene of Schools and of Children; 5. Hygiene applied to Agriculture; 6. Hygiene applied to Industries; 7. Veterinary Hygiene; 8. Naval and Military Hygiene; 9. Safety Appliances of all kinds; 10. Chemistry, Architecture, etc., applied to Hygiene. The University and other bodies have announced their intention of throwing open their suites of rooms, museums, libraries, etc.

The *Citizen* says:—"The Local Government and Taxation and the Gas and Water Commissioners of the City Corporation, with a Committee of the Commissioners of Sewers, have been considering the water question of the metropolis (presumably on the recommendation recently given by the Home Secretary), and their resolve is to recommend to the Government that they should refer it to a Select Committee for inquiry. The idea strongly prevailed that the Bill of the late Government might be adopted, provided it were subjected to 'modifications.'"

Professor Ray Lankester, F.R.S., delivered the last week's drawing-room lecture under the auspices of the National Health Society, and took for his subject "Germs: Unseen Enemies." Commencing with the simplest description of germs, as observed in growing plants, the lecturer described the principles of fermentative processes, both those associated with the production of alcohol and acetic acid, and also those peculiar influences which are connected with the decay of animal and vegetable life. The various forms assumed by the vibrios, with the important facts of their growth and multiplication, were demonstrated by diagram, and also shown microscopically. It was pointed out that heat is a certain destroyer of all germs, if it be of long continuance and of sufficient degree; that boiling is an undoubted means of effectually "sterilising" all vibrios; and a solution of carbolic acid (one in twenty) will, if it be brought thoroughly into contact with germs, at once render them inert. The lecturer described three varieties of these "unseen enemies," namely, those producing odours, those producing coloured products without odour, and those recognised as disease-producing germs. All bad smells, except those arising from chemical works and their products, were, he stated, due to the presence of vibrios; and, as an interesting illustration, the audience were informed that the flavour of cheese merely depended upon the presence of some of these germs, although both the odorous and colour-producing vibrios are harmless, and therefore do not need any precautions to be taken against them. With regard to the disease-producing varieties, Professor Lankester stated that it was yet quite a matter of doubt whether, with the exception of two diseases (malignant pustule and splenic fever), the presence of the particular form of bacteria caused the disease, or whether it was not merely associated with the condition of the patient and the debilitated state of the system generally. In the course of his lecture, the Professor suggested that it would be profitable, in the best sense, to establish laboratories for prosecuting original scientific research by competent professors into the many wide and important questions associated with the subject of the presence of unseen enemies in the daily life of our population.

The case of Nowell *v.* Williams is now again before the public for the benefit of the lawyers. It may be remembered that after the case had been tried at great length last year, and a verdict returned for the defendant, the plaintiff applied for, and obtained, a rule *nisi* for a new trial. The rule was granted, not on the usual grounds of misdirection or that the verdict was against the weight of evidence, but because the Lord Chief Justice of the Common Pleas, who tried the case, had, with some hesitation, admitted as evidence on the part of the defendant a letter which was objected to by the counsel for the plaintiff, and did not really strengthen the defence in the least. The Common Pleas Division, in which the application for a rule was made, shared the doubts of the Lord Chief Justice, and thought "it was impossible to say what effect the letter might have had upon the minds of the jury," and consequently the rule is now being argued at great length and expense before Lord Chief Justice Coleridge, Mr. Justice Grove, and Mr. Justice Lopes.

Speaking of the nomination of Sir Robert Christison as a candidate for the Lord Rectorship of the University of Edinburgh, the *Daily Telegraph* well remarks that this election ought not to be made the battle-ground of party politics. The venerable baronet is now the last living link that binds what was once the greatest of British medical schools to the splendid past, when it knew no jealousies because it feared no rivals. Sir Robert Christison was a Professor when barely out of his teens, and the story of his academic career would include all that is most worthy of remembrance in connexion with the University of whose finest traditions he is the most interesting living embodiment. It was greatly to be regretted that foolish sectional bickerings rendered it impossible for him to accept the office of Principal and Vice-Chancellor when Sir David Brewster died. Science makes such vast strides nowadays that probably few remember that Sir Robert was a brilliant pioneer of chemico-physiological research, when their grandfathers were proud to be his disciples. Men of

all parties ought to unite in promoting the election of this distinguished physician to the rectorial chair now occupied by Lord Hartington, and it would be well if Liberals joined the Conservatives in furtherance of his candidature.

Mr. George Collier, coroner, recently held an inquiry as to the death of William Tickel, aged sixty-two, an inmate of Bethnal-green Workhouse, who, it was alleged, died from an overdose of chloral. A paid nurse of the workhouse deposed that she had had charge of the deceased in the infirmary for three years; he was suffering from palsy and heart disease. At eleven o'clock on the night of Tuesday, the 13th inst., he received his usual dose of chloral, which was given by direction of the doctor. He had the same dose as was nightly given him—two tablespoonfuls. Witness did not know what quantity of chloral was in the draught; after she had given it him he complained of pains in his throat. The witness then sent for the night superintendent, but Tickel died about twelve o'clock. The assistant medical officer stated that when the death occurred he had only been two days on duty; his business was also to dispense medicines, and instead of filling the bottle intended for the ward in which the deceased was lying with drachms of concentrated solution of choral, he mistook the prescription for ounces, the symbols, with the exception of an additional line or mark, being identical. In consequence of the witness mistaking the drachms for ounces, the deceased and four other patients received 160 grains for a dose instead of twenty. He could only account for the death of the deceased through his having a diseased heart. The other patients slept soundly, and were drowsy during the day, and directly the witness discovered what had occurred he took means to repair it. Chloral was very uncertain in its action. He gave the overdose in ignorance. The resident medical officer stated that the deceased suffered from heart and lung disease. Two of the patients under his care were taking half as much again as the dose administered in the present case, and they felt no effect but drowsiness. After some discussion, twelve jurymen out of sixteen returned a verdict that the deceased died from heart disease, but they considered that his death was accelerated by an overdose of chloral administered inadvertently by the assistant medical officer.

A meeting (chiefly composed of ladies) of the Anti-vivisection Society was held last week at Willis's Rooms, under the presidency of Admiral Sir W. King Hall. A pamphlet was distributed to the company, containing comments upon a speech by the Bishop of Peterborough in the House of Lords upon vivisection. The discussion which followed the routine business of the meeting was carried on in a somewhat vehement and very dogmatic tone. It was declared with the confidence of unconquerable ignorance that not a single scientific fact had been ascertained through the medium of vivisection; and with respect to the action of anæsthetics, which the licensed practitioners of vivisection are compelled to administer, the allegation of a recent correspondent to the *Times* was quoted as proving there was no certainty in their use. Resolutions of the usual description were carried, declaring that the practice of vivisection is wholly unjustifiable, and embodying petitions to Parliament, praying for the repeal of the regulating Act, and for the passing of an Act entirely prohibiting vivisection.

At a town's meeting of the ratepayers and occupiers of the borough of Oswestry, held last week, the following resolution was carried unanimously—"That this meeting approves of and consents to the following resolution passed by the Town Council of the said borough at a special meeting on May 18, 1880: That the town clerk, as solicitor of the Council, be instructed to take the necessary steps for opposing the Bill introduced into Parliament by the Town Council of Liverpool for supplying the city of Liverpool with water from the river Vyrnwy, with a view of obtaining the insertion of clauses in the said Bill for the supply of water to the borough of Oswestry from the main pipes or reservoirs to be constructed by the Town Council of Liverpool under the said Bill, and that the costs of such opposition be paid out of the general district rates."

It is reported that the town of Memphis, U.S.A., having got thoroughly scared at the recent yellow fever visitations, has been constructing a system of sewerage which it is hoped will drain the city and prevent a recurrence of the scourge hereafter. Over fifteen miles of these sewers are now in operation, and in all the business sections and the thickly inhabited parts of the town the system will soon be completed.

THE HOME SECRETARY AND THE ANTI-VACCINATIONISTS.

The late member for Derby, in his new *rôle* of guide, counsellor, and friend of the Home Secretary, introduced, on Tuesday last, a deputation of anti-vaccinationists to that Minister. According to the reports of Sir William Harcourt's reply to the statements made to him, he, like his chief, "keeps his mind open" to conviction as to the merits of vaccination. He admitted that "the question is entirely one of evidence," and said that "if it can be shown that vaccination does not diminish small-pox, compulsory vaccination cannot be justified"; and his want of knowledge, though certainly not his openness of mind, was further shown by the statement, "As to other diseases being conveyed by the vaccine, it is very probable that such is the case even when great care is taken, but it is a question of the balance of advantages, which can only be decided upon an investigation of the full evidence." It would have been difficult to have made a more mischievous speech.

THE CASE OF HYPERPYREXIA IN THE ADELAIDE HOSPITAL, DUBLIN.

This patient, to whose case we have on more than one occasion alluded, appears to be recovering. The highest temperature recorded was 130·8°, but for the past few days only very moderate readings have been observed. To avoid any possible source of error the thermometer was sometimes placed in the groin or in the vagina, when it was found to rise to points between 120° and 130°. When visited last Monday, May 24, the patient seemed to be quite convalescent.

GUY'S HOSPITAL.

The occurrence of the Guy's Hospital biennial festival dinner, on Friday last week, gave "old Guy's men" an opportunity, which they were prompt to seize, of especially expressing their sympathy with the medical and surgical staff in the present circumstances connected with the nursing arrangements. A meeting, which was numerously attended, of former students was held an hour before the dinner, and the following resolution, proposed by Drs. W. F. Cleveland and Arthur Evershed, was carried unanimously:—"This meeting, consisting of former students of Guy's Hospital School, desires to express its very warm sympathy with the present members of the medical and surgical staff of the School in the extra anxiety which has been associated with their tenure of office during the past few months, and at the same time to record its conviction that in the hands of the present staff the past pre-eminence of the School of Guy's Hospital will be most worthily maintained." Such an expression of sympathy and confidence, signed, as it was, by more than a hundred of the old students, gave, of course, great gratification to the medical and surgical staff.

THE COMPULSORY NOTIFICATION AND REGISTRATION OF INFECTIOUS DISEASES.

This subject, which was brought forward at the annual meeting of the Dublin branch of the British Medical Association last January, has been discussed at a meeting of the Public Health Committee of the Corporation of Dublin, who have reported in favour of the desirability of carrying into effect some system of early notification and registration of infectious diseases. The matter is likely to be soon under the anxious consideration of the King and Queen's College of Physicians and the Royal College of Surgeons in Ireland.

"VACCINIA GANGRÆNOSA."

At the closing meeting of the present session of the Medical Society of the College of Physicians in Ireland, Mr. William Stokes read a paper on a case of gangrenous inflammation following vaccination, or "vaccinia gangrænosa." The paper was illustrated by a series of admirably executed coloured drawings of the present case, and of one exhibited by Mr. Jonathan Hutchinson to the Royal Medical and Chirurgical Society on December 9 last year. Mr. Stokes' patient had been, previous to her illness, a healthy, strong, well-nourished girl of nine months. She was admitted to the Richmond Surgical Hospital on February 17, 1880. According to her mother's account she had been vaccinated ten days previously, and within forty-eight hours after the operation a number of purple and black spots appeared—first on the buttocks, next on the face, and subsequently all over the body. On admission the child presented the following appearance:—The body and face were sparsely sprinkled with spots, each of these covered with a yellow scab, and exactly resembling the crusts to be seen in a mild case of variola that is convalescing. There were large sloughing surfaces on both buttocks, on the back of the right thigh, on the calf of one leg, and on both arms. The largest of these was on the right buttock and back of the right thigh; it was eight inches long and two and a half inches wide at its widest part. In the middle of it was a large black slough separating; it was dry and looked like leather. The slough implicated not only the whole skin, but also the subjacent tissues. The other sloughs were smaller, and those on the calf of the leg and on the arms had not yet begun to separate. There was no inflammation around these latter. There were three distinct well-marked vaccination vesicles on the left arm, one of which had been ruptured. They presented the appearances usually seen on the ninth or tenth day. They were healthy-looking, but there were large sloughs in their immediate proximity. Under a suitable treatment and nourishing dietary the child happily made an excellent recovery. Mr. Stokes pointed out that the case presented many features of resemblance to an affection described by the late Dr. Whitley Stokes in June, 1807, in the *Dublin Medical and Physical Essays*, and to which the names of "pemphigus gangrænosus," "the eating hive," and "the burnt holes" had been given,—the "varicella gangrænosa" of Mr. Hutchinson. Mr. Stokes admitted that difficulties existed as to the diagnosis of "vaccinia gangrænosa" in the case reported by him. In the first place, three other children had been vaccinated with lymph derived from the same source, without injury. Secondly, the great rapidity with which the pemphigoid rash manifested itself after the vaccination, raised a great doubt as to the connexion between the vaccination and the development of the eruption. A third difficulty was the fact that the vaccine vesicles themselves did not, either primarily or secondarily, participate in the gangrenous action. Mr. Stokes would be sorry to offer any decided opinion on the point, yet he could not but think, notwithstanding what has been said and published to the contrary by a pathologist and surgeon of such conspicuous ability and powers of accurate observation as Mr. Jonathan Hutchinson, that the weight of evidence is opposed to the view that there is a connexion between the two conditions. An interesting discussion ensued, in which the balance of opinion appeared to be against the idea of a connexion between the vaccination and the gangrenous disease.

MEETING OF MEDICAL OFFICERS OF HEALTH IN LEEDS.

A combined meeting of the North-Western, Northern Counties, and Yorkshire Association of Medical Officers of Health was recently held at Leeds, Mr. W. S. North, of York, President of the Yorkshire Association, acting as chairman. After a visit to the Farnley Iron Company's works, a conference was held, at which Mr. F. Vacher, of Birkenhead, read a paper on "Health Economy." This was followed by a discussion, after which Dr. Hime, of Sheffield, read a paper, in which he called attention to the prevalence of whooping-cough among young children in Sheffield and other places. This paper also gave rise to a discussion. The President then read a letter which had been received from Dr. H. F. Parsons, formerly a member of the Yorkshire Association and now an inspector under the Local Government Board, containing some (unofficial) suggestions on the method of preparing vital statistics by medical officers of health. In the course of the conversation which followed the reading of the letter, Dr. Goldie stated that, in view of the coming census, he had adopted a plan by which, with the help of the registration officials, he could represent on a survey-map of Leeds the deaths that had taken place from different diseases in the various districts, and thus obtain a record which would be of great value. A resolution was eventually adopted to the effect that the letter of Dr. Parsons be referred to Mr. Vacher, with the request that he would embody the suggestions contained therein in the form of a resolution to be referred for approval to the President of the Northern Counties Association and the President of the Yorkshire Association, and the conclusions arrived at to be afterwards forwarded to the proper authorities.

THE VICEREGAL COURT IN IRELAND.

In addition to the appointments which we noticed last week as having been made in the household of his Excellency the Earl Cowper, K.G., Lord Lieutenant of Ireland, we learn that Dr. Archibald H. Jacob has been appointed Surgeon-Oculist in Ordinary to his Excellency.

THE CORONER'S COURT.

Previously to the reign of Henry VII. none but "lawful and discreet knights" were eligible for the office of coroner, and by a statute dated from Westminster in the first year of that monarch's reign, they were expressly forbidden to take fee or reward, being, in fact, in the position of justices of the peace—"the great unpaid,"—and in the 25th Edward III. a man was actually removed from this office for being only a merchant. But since the property and social qualifications have been allowed to fall into oblivion, and fees have been regularly fixed by the court of quarter session and paid out of the county rate, no new qualification has been imposed, though, by common consent, the popular choice has almost always been in favour of members of the legal or medical professions. The office, too, though laborious and responsible, is generally sufficiently lucrative to excite keen competition, and it is naturally difficult for any—especially members of the two professions most interested—to form a dispassionate judgment as to their fitness for the office in dispute. The office and power of the coroner is undoubtedly, *primâ facie*,

judicial; and with two minor branches of it medical men, as such, have no concern. To inquire concerning shipwrecks, and certify whether wreck or not, and who is in possession of the goods, would naturally seem to be the function of a lawyer, though such matters always find their way to other and special courts. Concerning treasure trove, to inquire who were the finders, and where it is, and whether anyone be suspected of having found and concealed a treasure, is also no medical question, though in these days one which rarely presents itself. The chief, and practically the sole, duty of the coroner is, however, to ascertain "when any person is slain, or dies suddenly or in prison," the manner and cause of his death. This inquiry must be *super visum corporis*, for if the body be not found the coroner cannot sit. He must sit also at the very place where the death happened—so at least the law enjoins, though by custom his court is now held at the nearest convenient house, and the inquiry is made by a jury of twelve, at least, gathered from the immediate neighbourhood. If any be found guilty by this inquest of murder or homicide, he is to commit them to prison for further trial at the Court of Queen's Bench or at the next assizes. In modern times violent or sudden deaths have come to mean all deaths consequent on accidents occurring within a year and a day of the injury, and deaths which cannot properly be certified by a medical man, either from none having been called in before death, or from the conscientious refusal of the medical attendant to certify to the cause, whether his objection be grounded on his entire ignorance of the cause, or on justifiable suspicions of foul play.

ST. MARK'S OPHTHALMIC HOSPITAL, DUBLIN.

On Tuesday, May 18, Mr. Arthur Henry Benson, Lecturer on Ophthalmic Surgery and Aural Surgeon in the Ledwich School of Medicine, was elected Assistant-Surgeon to this institution, in room of Dr. J. B. Storey, who was recently elected Surgeon.

PROFESSOR VON LANGENBECK'S CASE OF SECONDARY SUTURAL UNION OF THE RADIAL NERVE.

The above-mentioned case was shown to the members of the Berlin Medical Society in January last. The report of Professor von Langenbeck's lecture on it is given in full in the *Berliner Klin. Wochenschrift*, No. 8, 1880, and from it our abstract is taken. The patient, a man of thirty-one, was injured in several places on September 5, 1879, by the fall of a ceiling in the house in which he was working. The right arm, which mainly interests us here, was bruised on the outer side, and there was some sloughing; an abscess formed and was opened, and a scar was left, corresponding exactly to the spot "where the radial nerve, after taking its course in an outward direction round the forearm, comes to the surface between the triceps and brachialis anticus muscles." At the same time a complete paralysis of the extensors of the hand and fingers, which dated from the time of the accident, persisted. The hand was pronated and hung loosely down. The fingers were slightly flexed and could not be extended, nor could the thumb be abducted. The corresponding muscles were unaffected either by the constant or induced current. The back of the hand and the arm were anæsthetic and somewhat œdematous. The diagnosis made was "breach of continuity in the right radial nerve as the result of the previous sloughing." On November 25, 1879, an incision six centimetres long was made through the scar, and, after removing some very soft subcutaneous tissue, the divided ends of the radial nerve were found embedded in cicatricial tissue, about two centimetres apart, and *without* bulbous swelling. They were dissected out, a small portion carefully removed with the scissors from each, and then united by a catgut suture carried through them with a fine round needle about one millimetre from their extremities. The tension required to bring them together was very great, and made Professor Langenbeck fear an unsuccessful result. The wound was dressed antiseptically, and the arm put on an obtuse-angled splint. On December 9 the wound had healed. On December 14 the induced current caused distinct contraction of the extensors of the hand and fingers, and there was a slight power of voluntary movement. On December 20 the latter was well marked; and on January 14, 1880, under daily treatment with the induced current, the patient could extend his fingers completely, and raise the hand to a level with the forearm, but not further. In his remarks on this interesting case, Professor Langenbeck observed that, owing partly to the great tension of the nerve-ends, and partly to the fact that no nerve-tissue could be found in the portions removed by the scissors, he had very little hope that continuity would be restored. Gluck, however ("Experimentelles sur Frage Nervennaht und der Nervenregeneration"—*Virchow's Archiv*, Bd. 78, 1878), has shown that the divided ends of a nerve unite by means of an intermediate substance consisting of granulation tissue in which spindle-cells develope and send out processes which unite the axis-cylinders of the nerve-ends together, and finally become converted into true nerve-fibrils. Probably some such intermediate substance was formed in Professor Langenbeck's case. The radial nerve has been sutured in two other cases: by Létiévant unsuccessfully, and by Esmarch (sixteen months after the injury) with almost perfect restoration of the functions and sensibility of the hand. On the whole, Professor Langenbeck does not consider the results of operation for nerve suture hitherto very successful. In all the published cases except the present there were severe pains in the course of the sutured nerves, and the wound did not heal by first intention, as here, or went through a long period of suppuration. Most of the former cases were sutured with silver wire or silk. Langenbeck strongly recommends catgut: it irritates less, can remain *in situ* permanently, and can be carried through the nerve-ends themselves. The absence of bulbous swelling in the divided nerve-ends has been already noticed. Professor Langenbeck explains this deviation from the rule in his case by the radial nerve having probably suffered a slow, and not a sudden, process of division during the sloughing of the bruised tissue of the arm. His case is further peculiar in the fact that the motor or centrifugal functions of the nerve were restored before the centripetal or sensory. The back of the hand remained anæsthetic when the extensor movements of the hand and fingers were completely restored.

THE GENERAL MEDICAL COUNCIL.

We understand that a meeting of the Executive Committee of the Medical Council has been summoned for Thursday, June 13.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

The Harveian Oration will be delivered at the Royal College of Physicians by Dr. J. W. Ogle, on the afternoon of Friday, June 25, at five o'clock.

MEDICAL PARLIAMENTARY AFFAIRS.

Liabilities of Employers for Injuries.—In the House of Lords, on Monday, May 24, Earl De la Warr introduced and moved the first reading of a Bill relative to the liability of employers for injuries received by their servants while under their employ. The Bill was read a first time after the Lord Chancellor had obtained a promise that the Bill should not be proceeded with till that of the Government came up to their Lordships' House.

Water-Supply.—In the House of Commons, Mr. Gladstone asked for a few days before answering the question whether the Government proposed to deal with the matter of the metropolitan water-supply.

Contagious Diseases Acts.—Mr. Mundella said the Government had no intention of repealing any part of the Contagious Diseases (Animals) Acts, 1878, as they have no desire or intention of diminishing the safeguards against foreign contagion. Mr. Gladstone said that the Government propose to re-appoint the Committee on the Contagious Diseases Act for Women.

ON SOME ANALOGIES BETWEEN THE NERVOUS SYSTEM AND THE ELECTRIC TELEGRAPH.

(*Concluded from page* 562.)

Persons like myself, who can neither claim to be theologians nor men of science, cannot fail to be both amused and saddened by watching the attitude which Religion and Science present to each other, and hearing the grandiloquent and self-asserting claims set up by both parties—Religion and Science. If I attempt to put these claims and assertions into the form of a dialogue between Religion and Science, you are not to suppose I mean to say that gentlemen of education and high standing and attainments, on either side, would use the *ipsissima verba* employed; but I do mean to say that the ideas of which the words are expressive prevail, and bear the fruit which all pregnant ideas do, to an extent, on both sides of the great controversy, which has, at least in this country, never been reached before.

"Listen," says Religion, "to me who am the accredited and recognised ambassador and representative of the Most High! Your happiness in this world, and your eternal happiness in that which is to come, depend upon your due reception of, and obedience to, the message which I am commissioned to impart. In respect to religion and morals I am infallible, and God has committed into my hands the keys of heaven and of hell. Unqualified faith in my teaching is indispensable to your salvation. All knowledge and all power is of God; and theology, or the disclosure of His character, His attributes, and His dealings with mankind, which is committed to my teaching, is the 'queen of sciences,' and is entitled to dominate and overrule all mundane science.

"The charter conveying my commission is written by the finger of God in the heart and conscience of mankind, as well as embodied in holy books, written by men inspired by Him, and miraculously preserved and handed down to the latest ages for their instruction and guidance. I am the true civiliser and regenerator of mankind. Without me the whole world would sink into anarchy, barbarism, and wretchedness.(a)

"It is your duty and privilege not only to supply all my temporal necessities, but, by the resources of your genius and knowledge, to contribute what you can to the adornment and the success of my temples and worship; and by the arm of your temporal power, to protect and support me in the exercise of my spiritual functions. At the same time, I expect and insist that your researches and teaching shall not be conducted and formulated in such a manner as to contradict the word of God or the teachings of the Church which are founded upon it.

"If you be obedient and loyal to me, I shall bless and consecrate your undertakings and the work of your hands; but if the contrary, your character and success in this world shall be destroyed, and the curse of God shall fall upon you both here and hereafter.

"If I had not been despoiled of the property given and bequeathed to me in former times by my devoted followers and friends, I should now have been able, and that almost without your assistance, to keep up the prestige and glory of our family by equalling, if not surpassing, the former magnificence, both in architecture and furniture, of the buildings required for their accommodation. But you know that I am doing my best to attain this desirable object.

"Your conduct, however, has given such encouragement to scoffers and unbelievers, and to all the powers of darkness and of evil in the world, as to make my life one of continual warfare and disquietude. As the Church militant on earth, I am obliged to keep up a system of fortifications and batteries, of defences and tactics, commonly called anathemas, excommunications, articles, confessions, creeds, apologies, oaths, and professions, and must continue to do so in an aggressive as well as defensive warfare, till my Lord and Master has, by my means, subdued all things and brought them under subjection to Himself.

"You have the impiety, by inference, if not by direct assertion, to deny the immortality, and even the existence, of the soul, and to maintain that matter alone is capable, by its own powers and properties, of doing anything that pertains to humanity. You challenge me to prove the soul's existence. But what if I ask *you to prove the existence of matter;* and if you cannot do so, what will become of your claims in its behalf? Yes! and I do challenge you to prove its existence. Try to do so, and I shall refute your arguments and laugh at your discomfiture.

"By the misapprehensions that have arisen, mainly through your means, as to the terms and character of my service, and at the same time by the more tempting offers you are now in the habit of giving for service with yourself, I am unable to procure and retain that class of highly qualified servants and domestics I require, and have in past times been accustomed to—the most gifted and highly qualified, I may say, that the country could supply.

"But the Church will remain unconquered and invincible, as she has always been. The sufferings and the blood of her saints and martyrs (now a glorious army in heaven), instead of weakening her strength, have only increased and consolidated it; and as her past success has been, so it will go on increasingly to the end of the world."

Science makes reply to the following purport:—

"Your boasting, your claims, and your denunciations make it necessary for me to state the nature of *my* claims on the recognition and gratitude of mankind, and to assert the rights and the freedom of thought and of action to which I am entitled.

"In spite of all you have said, you are perfectly, though ungratefully, aware of the inestimable advantages you derive from me. The very temples and cathedrals reared for your service, as you have just now acknowledged, with all their paraphernalia and their faith-inspiring adornments, their statuary and paintings, their sublime music and soul-ravishing hymns, are contributed by myself and our younger brothers, the artist and the poet. Where would the civilisation and regeneration of mankind have been without the aid which I have been the means of contributing? To me, mankind owe their supremacy and power over the lower members of creation. My long-continued observation and study of the worlds with which our Father has filled the heavens, and of the laws and the forces by which He governs all things, have enabled me to think out and achieve many of those inventions by which the human race has reached its present state of comparative happiness and civilisation.

"By my power of traversing the ocean, all parts of the world can be penetrated and discovered, and wealth, plenty, and knowledge diffused through the earth. The two great powers, heat and water, by means of which God accomplishes many of the operations going on in the world, I have harnessed together, and can guide, by my mechanical appliances, in such a way as to make a few intelligent persons do the work of hundreds, or even thousands, not possessed of such aid. I have literally fulfilled the words of one of your prophets (Isaiah xl. 3), and made straight a highway in the desert for God. Valleys have been exalted, and mountains and hills made low, crooked places made straight, and rough places plain, so that all nations may meet and shake hands together. Many run to and fro, and knowledge is increased (Daniel xii. 4). Wisdom and knowledge, by my means, are sold or given at a price which bears scarcely an appreciable proportion to their real value. Rich and poor alike are by me shown, day by day, whatever is passing in the earth, and all the kingdoms of the world and the glories of them are disclosed to their view, and become ideally the property of all who are within the reach of a free Press.

"Your holy books and records—the foundation and grounds

(a) In proof of these claims it is only necessary to refer to the famous "Syllabus" of Pope Pio Nono.

of your rule and authority—have by my means been translated into all the languages, and circulated by millions through all the nations of the world.

"The God-like power of disregarding time and space, discovered by me, places, or is in progress of placing, all nations —nay, individuals, if need be—in almost immediate communication with one another.

"The light of the sun I have, by my chemical and optical appliances, brought into subjection, so as to obtain and to reproduce, and put within the reach of all, pictures of whatever is within the domain of nature or art—more exquisite and perfect, more true and beautiful, than those that the most gifted of artists could produce, even at a hundredfold the time and cost.

"These are but a few of the achievements which entitle me to the gratitude, respect, and confidence of mankind, but enough to show that I am justified in speaking with authority on any misunderstanding that may have arisen between us.

"You think that I have thrown disrespect and discredit on your Scriptures by the reading and interpretation made by me of those scriptures which God has written with his own finger on the everlasting records of the world. If the undeniable interpretations and inferences arrived at from these records do not exactly fit and harmonise with the statements and interpretations of your sacred books, and if you cannot refute these deductions, you are bound either to admit that your records are in some respects erroneous—at the sacrifice of course, to some extent, of the high claim of inspiration and infallibility you claim for them,—or else, by a new and more correct translation and interpretation, to show that they *are* in accordance with the facts and reasonings brought to light in these later times.

"Instead of those endless disquisitions on theologico-metaphysical questions which are unsolvable, and those hair-splitting distinctions and dogmatic teachings which waste the strength and lead to intestine schism and war among your followers, I would suggest that their time would be more profitably spent in acquiring a knowledge of their own bodily and mental constitutions and functions, a true understanding of which would doubtless be the means of greatly correcting and improving the methods of educating mankind, which in past times have been mainly in your hands.

"Pious frauds and modern miracles are becoming stale and seen through. Great popular revivals and other outbursts of religious enthusiasm may for a time stifle the voice of reason and retard the progress of knowledge, but only for a time. It was doubtless from a temptation to make profit out of your credulity and desire to verify the traditions you hold so dear, that certain rogues among the lowest of my dependents have of late, by means of mysterious tappings, movements of tables, sounds of music, traces of writing, glimpses of human hands, and other tricks of legerdemain, been in the habit of making it to be believed that the dead are still living under your custody, and are here again mysteriously concealed within certain secret vaults or chambers somewhere in connexion with the family mansion.

"The result of your puerile challenge to a metaphysical duel concerning the existence of matter, even if I accepted it, would prove nothing, whoever of us should succeed most in darkening the truth by a cloud of words. The common sense of mankind is sufficient to settle the question, and to that I am content to appeal.

"Many of those high-sounding powers and claims which you have set up I do not admit, but, knowing that you have not now the power to enforce acquiescence in them, or to punish the neglect of those rules you lay down in connexion with them, I quietly ignore them, and think it neither for your advantage nor for mine to dispute upon the subject.

"You complain that you have been deprived of many of the rich legacies and gifts bestowed on you by your friends and admirers. But you cannot deny that many of those persons were wheedled out of them by the unfair fascinations, and even the threats, that you made use of; and that the rightful heirs were thus often reduced to poverty and wretchedness. The name and credit of the family were also thereby sullied, and their character and usefulness greatly impaired by the arrogance, luxury, idleness, and immorality which a superabundance of riches is apt to induce. You are quite able, without these ill-gotten gains, if you can only secure the love and devotion of your adherents, to carry out those improvements and renovations you speak of; and I confess that I am glad to see modern and tasteful furniture and arrangements taking the place of the worn-out and dilapidated furnishings of our Father's estate, and shall continue to give you the same assistance in this respect that I have formerly done.

"You complain, too, that your life is a course of warfare and disquiet. I have no wish to make it so, but, on the contrary, desire to be on friendly terms with you, though not quite at the sacrifice of my conscience and freedom of thought. Some of those tactics and fortifications you speak of are now become antiquated, and inadequate to cope with the modern artillery of your assailants, among whom you no doubt reckon myself. But to show how mistaken you are, I am willing to enter into a *concordat* with you; and I make offer, provided you agree to abandon some of these erections, to help you to construct others on improved principles, and better calculated to ward off the aggressions of your foes, and to recover for you much of what you have lost.

"Yes, my dear sister, notwithstanding our occasional quarrels, and the sharp and abusive words you sometimes bestow on me, I have no wish to depose you from the position of housekeeper and mistress of the family, which you have so long held. I am willing to admit that the comfort and happiness of the family depend more on you than on me, and that many of these discoveries, of which you think I have been boasting, are as liable to lead to evil as to good results if used in a way that is hostile and disobedient to you. Somewhat more of mutual confidence and esteem than we have in general hitherto shown would greatly conduce to our own comfort and to the advantage and contentment of the family. You ought not to be above taking counsel with me in many of your doubts and difficulties. There are many things within the department of which you have charge, affecting the well-being and elevation of mankind, in which I could very materially assist you, and I am perfectly willing to do so, for our interests and objects ought to be, and are, the same. On the whole, I admit that the good order and family discipline you maintain, the succour, consolation, protection, and instruction you bestow upon the poor, the stranger, the afflicted, and the defenceless, and the care with which you look after the morals and the well-being, both present and future, of the family, are understood and appreciated by me, and I know not who could supply your place in our Father's house."

I shall not follow the dialogue further, but allow the high contending parties to settle their differences at their leisure. W. F.

FROM ABROAD.

Puerperal Septicæmia.

Dr. Parish read an interesting paper upon this subject at the Philadelphia Medical Society (*Phil. Med. Times*, February 14), basing it chiefly on 181 cases observed in the obstetric wards of the Philadelphia Hospital during the years 1870-79. These cases consisted of 88 of puerperal fever, 8 of septicæmia, 2 of pyæmia, 35 of general peritonitis, 5 of pelvic peritonitis, 28 of pelvic cellulitis, 6 of metritis, 6 of phlegmasia dolens, and 3 of erysipelas. Of the 181 cases, 142 occurred in the winter and spring months, when ventilation was least effective. Of the 181 women, 71 were under twenty years of age, while 132 were single women, as were probably several of the others who were professedly married. There were only 45 multiparæ to 136 primiparæ. Of the 181 cases, 61 terminated fatally. During the ten years embraced there were 1872 deliveries, with 131 patients having marked septicæmia, 60 proving fatal —being only a little over a mortality of 3 per cent. of the deliveries, but a large mortality of the cases affected. It is, however, supposed that several of the other cases should be classed under the same diagnosis, reducing greatly the proportion of fatal cases. Of the 35 cases of general peritonitis there were 18 recoveries—a remarkably favourable result. In the description of the symptoms, pathology, and treatment, Dr. Parish enters into considerable details for which we have not room, being able only to give his conclusions:—

"1. Puerperal fever and puerperal septicæmia are dependent upon essentially the same poison, and this originates in

decomposing organic material. 2. This poison may be developed in the woman, or may be derived from sources external to her. 3. Puerperal fever may be transferred from one puerperal patient to another. 4. Patients suffering with traumatic puerperal inflammation are thereby rendered more liable to internal infection. 5. The poison is especially prone to develope in lying-in patients suffering with traumatic inflammation, and from them other patients may be infected, though they themselves may escape septicæmia. 6. In patients suffering with autogenetic infection the symptoms vary greatly, according to the absence or presence and degree of traumatism, and according to the special mode of the autogenetic infection. 7. The symptoms of patients suffering with external infection observe a considerable degree of uniformity, as do also the pelvic and abdominal lesions. 8. The treatment of the autogenetic cases must vary greatly, for the same reasons that the symptoms vary. 9. The treatment of heterogenetic cases is more uniform, and should consist usually in morphia as a calmative, a local abstraction of blood, quinia in antipyretic and antiphlogistic doses, warm, moist external applications, warm, disinfecting intra-vaginal or intra-uterine injections, mild diuretics, stimulants according to depression, and liquid and highly nutritious diet."

With regard to the abstraction of blood, Dr. Parish observes—"The one remedial measure that I have here mentioned that will probably meet with the most criticism is the abstraction of blood in a disease acknowledged to be due to septicæmia. But let it be remembered that I advocate its use in the heterogenetic variety of the infection, not when blood-poisoning has occurred as the gradual result of absorption of septic material originating in the decomposition of the lochia or of portions of the placenta, or of sloughs of the soft tissues. It is in the class of cases usually occurring in endemics, then, that it will prove, as it seems to me, of most value, leaving out of consideration the inflammation due to traumatism during labour. This local loss of blood has seemed to me to prevent the pelvic inflammation reaching such a degree of development as to be productive of pus and putrescence. If this effect is secured, the patient escapes the additional dangers connected with the secondary poisoning to which I have referred. When the application is made after the calmative effects of half a grain of morphia have been secured, the extreme nervous disturbance at times following this application is obviated. It is only in the very incipiency of the disease, however, that I would resort to the abstraction of blood. It is only then that it can be of benefit; later it must prove detrimental. I prefer this local loss of blood to venesection, because there is associated with it the maximum of pelvic depletion with the minimum of systemic depression."

At the discussion which followed the reading of the paper, Prof. Goodell observed that the statistics of the institution with which he was connected (the Preston Retreat) differed somewhat from those furnished by Dr. Parish, but then these latter were chiefly concerned with single women, a very large proportion of whom were primiparæ—these being just the cases in which puerperal affections are most prevalent. At the Preston Retreat, of 1503 or 1504 deliveries fifteen were followed by death, but in eight of these it occurred from causes quite independent of infectious or septicæmic influences, so that there were but seven deaths from this source in more than 1500 cases. *Prophylactic measures* are strictly enforced, and are regarded as of the greatest importance. As soon as a woman falls into a labour she has a warm bath, and no manual examination is made until the hands have been thoroughly washed with carbolic soap and nail-brush, and then lubricated with carbolised lard. The nurse also washes the patient's person with carbolised water, and with a small sponge washes out the vagina with the same. After confinement, some oakum and a carbolised solution are given the patient, with which she washes her person twice a day, this being subsequently thrown away. The nurse never performs this office unless the patient is very sick. The temperature is taken night and morning, and when it is 100° a powder is given containing a quarter of a grain of morphia and ten grains of quinia, and repeated every two hours, which reduces the temperature and puts the woman to sleep. Prof. Goodell also—following out a remark made many years since by Dr. Hodge, that the position of a woman after delivery upon her back, owing to the curve of the vagina and the swelling of the vulva, caused retention of the lochia—resorts to what he calls *puerperal gymnastics*. Every woman the day after confinement sits in a chair while her bed is made. In suspected cases injections of a 5 per cent. carbolised solution are thrown into the vagina by means of Chamberlain's glass-nozzle syringe, without having to introduce the hand, for fear of affecting other patients. The daily use of the thermometer is a valuable means of indicating the condition of the patient; but sometimes its rising to 100° or 101° (the pulse and general condition being good) causes false alarm. In some cases these freaks cannot be explained; in others they are connected with the secretion of milk. But if the temperature rise decidedly on the third day it is generally due to septicæmia. It only very rarely happens that milk-fever causes any rise of temperature, and very often what is called milk-fever is a mild form of septicæmia. With regard to *delivery of the placenta*, Dr. Goodell observed that he never delivered it with the mother on her side, as the air rapidly enters the womb, and hospital air so entering may give rise to septicæmia. He therefore places the woman on her back, and delivers by Credé's method; but this is of less consequence in private practice.

In regard to the identity of erysipelas, septicæmia, and puerperal fever, Dr. Goodell referred to some very pertinent cases in the Preston Retreat. One woman had a well-marked attack of septicæmia, who gave erysipelas to her child; from these cases infection was conveyed to two other women, who died. Finally, the nurse who attended the last two cases became seriously ill from erysipelas. Dr. Albert Smith stated that his experience did not support these views, for he had not found that simple idiopathic general erysipelas gave rise to puerperal fever. He had had such cases while attending lying-in women, but had never found septicæmia resulting. The relation of the diseases is certainly not direct, as it has been considered, although from erysipelatous cases attended with suppuration the hand of the practitioner may communicate to abraded surfaces, or open points upon the genitals, septic poison which will develope puerperal fever. Dr. Smith greatly approves of, as a prophylactic, the washing out the vagina with carbolised water, continuing these injections every three or four hours for five or six days. When septic infection has occurred, he prefers Labarraque's solution (℥ss. to Oss. or Oj.), or permanganate of potassium (gr. ss.-ij. ad ℥ij.). As to leeching the abdomen, although a favourite remedy of Prof. Meigs', he should hesitate to resort to it, as few cases could bear the loss of blood, and he failed to appreciate the distinction as to the cases best suited for it, laid down by Dr. Parish. Of warm applications and good, plain, nourishing food he has a high opinion, and he believes that enough stress is not laid upon this part of treatment. He had seen cases kept alive and recover after two weeks of nutrition by the rectum (one or two ounces every hour of milk or meat-broth), when the stomach rejected everything and no medicine could be retained. Under this treatment the patient recovered without any medical aid, except external applications. He believed that the value of rectal alimentation could not be over-stated. Dr. Parish, in his reply, said that notwithstanding the general opinion against the abstraction of blood, his own experience in severe cases had fully warranted his recommendation. He had seen a "gaseous" fluttering pulse become fuller and stronger after bleeding. He would abstain from leeching in autogenetic cases, as he had never seen one which he thought would bear it; but in heterogenetic cases the abstraction of blood is often of the greatest value.

The French Margarine Butter.

At a recent meeting of the Paris Académie de Médecine (*Bulletin*, May 11; *Gaz. des Hop.*, May 13), M. Riche read an important report proposed to be forwarded to the Minister of the Interior in reply to a question which he had addressed to the Academy regarding the substitution of margarine for butter in the Paris Lunatic Asylums. Complaints of this had reached the ear of the Minister, and on inquiry of the asylum managers he learned that the change had been made on economical grounds; and he now sought the opinion of the Academy in a sanitary point of view. The committee to whom the subject was referred, and of which MM. Delpech and Riche were the most active members, undertook a thorough investigation, and found that the margarine was so distasteful to the patients and *employés* that its use had to

be abandoned in the preparation of many dishes, and that it was now employed on a comparatively smaller scale. But the inquiry widened, for it was found that this substance is manufactured on a large scale in Paris and its environs, so that more than 15,000 kilogrammes are fabricated daily, and the determination whether the product is a wholesome one is of very considerable importance, and one, indeed, that greatly concerns ourselves, who eventually become its chief consumers. "We have learned," the report states, "that the margarine made in France is employed directly only to a small extent, and that only by the cheap restaurants—not to be spread on bread, but for the preparation of ragoûts and spiced dishes. But the quantity so consumed only represents a very small proportion of the mass fabricated. The French margarine has two principal destinations—a very large proportion being expedited to Holland; whence it is afterwards sent to the colonies and England, while a very important quantity leaves Paris for Normandy and Brittany, whence it returns baptised as butter, from having been mixed with the butters of those provinces."

It seems that M. Mège-Mouries, well known for his improvements in the manufacture of bread, announced some years since the existence of a new alimentary product, which he proposed as an economical substitute for butter under the name of margarine, oleo-margarine, or margarine butter, and which consisted in the mixture of diluted milk with beef and other fat which had undergone an elaborate manipulation under high pressure and an elevated temperature. This was found to be unremunerative as a commercial product, and later manufacturers have added to the fat (itself not always of the purest quality) from 10 to 30 per cent. of a vegetable oil derived from the *Arachis hypogœa*, which being cheap, white, inodorous, and tasteless, effectually serves the purpose of adulteration. Still, the taste of the product is much objected to in the asylums, and the following are the conclusions which the reporter, after his complete investigation, arrives at:—"1. It results from the trials made at the asylums during three years, that the *employés* and many of the patients cannot tolerate the substitution in the preparation of the principal articles of their food. 2. Some very sensitive and delicate patients are placed by it in highly unfavourable conditions as regards their alimentation, and consequently in the maintenance of their health; and with regard to the others, it is a change of regimen (for in Paris butter enters so generally into cookery) which is always mischievous, especially in persons whose health is already deteriorated. 3. The margarine of Mège-Mouries is no longer an object of commerce, being too dear. That which is actually in use is an industrial product open to various frauds—vegetable oils are especially introduced,—and if it is easy to decide by chemical analysis whether a given product consists of butter or margarine, it is very difficult to affirm whether this margarine is pure or mixed with oils. As, on the one hand, daily experience shows that it requires a certain time for the stomach, accustomed to cookery with fats, to accustom itself to cookery with oil, so, on the other hand, the physiological trials made by M. Berthé lead to the conclusion that vegetable oils are of more difficult digestion than animal fats. 4. Fatty bodies are only absorbed when in a state of emulsion. M. Lailler's chemical experiments and the ordinary practice of cookery having shown that margarine forms an emulsion less easily than butter, and that the emulsion is less stable, the conclusion follows that margarine is under less favourable conditions for absorption than butter. 5. Your committee, therefore, recommends you to inform the Minister that you are of opinion that it is not desirable for margarine to continue to be substituted for butter in the asylums." The conclusions were unanimously adopted.

BIGELOW'S LITHOLAPAXY, OR RAPID LITHOTRITY WITH EVACUATION.—Dr. Keyes, of the Bellevue Hospital, reporting on the progress of this operation, observes that so rapid has this been that it seems to be upon the eve of general adoption in England and America. His present communication is based upon twenty-one cases which have occurred in Dr. Van Buren's and his own practice. Up to February, 1880, the operation had been performed in the United States and England 107 times with six deaths, all these occurring in patients who were far from healthy.—*Amer. Jour. Med. Sciences*, April.

REVIEWS.

Manual of the Principles and Practice of Operative Surgery. By STEPHEN SMITH, A.M., M.D., Surgeon to Bellevue and St. Vincent Hospitals, New York. Boston: Houghton, Osgood, and Co. London: Trübner and Co. Pp. 689.

IN this work we are presented with an enumeration and a description not only of all the major and minor operations, but of all the manipulations which a surgeon can be called upon to do. The author has spared no pains in making it as comprehensive as possible; and has treated his descriptions of operations in such a manner as to show that he is widely familiar with the practical details of surgery. The theoretical model the author has professedly set himself to follow—viz., Malgaigne's advice rather than his work—brings him at times into difficulty and leads him beyond the range of operative surgery. In most works on operative surgery it is only the major operations that are treated of; but in a work such as this, where all possible manipulations are mentioned, it is increasing the size and scope of the work to no purpose to give the symptoms of disease where no operation is required. For instance, the author discusses concussion of the spinal cord, and various brain lesions, inflammation of muscles, of bursæ, and of sheaths of tendons; burns and scalds, ulcers, injuries to various organs, etc. These and many others, followed by no surgical operation or manipulation—or dressing, for that matter,—can hardly be said to be in keeping in a work called Operative Surgery. Not only so, but it weakens the work in its details of operations, as the space available for major operations is much curtailed.

The introductory remarks on "the Principles" are very useful, and might be made much more so if more method were introduced into them and an example or two given of how a case ought to be taken. The weakest chapter of the work is that upon "Amputation." It would seem as if the author were hurrying to an end, this chapter (No. 58) being only two from the last in the book. The language is, evidently from a limit in space, over-terse, and the sentences cramped. Then again such well-known operations as Syme's or Teale's are not put down in the index, and in the text we find operations are described with the names of Syme and Teale added at the foot of the page. The author's descriptions of what are called Syme's and Teale's amputation are something totally different from the operations devised by these surgeons. We are not of opinion that operations should go by men's names, as they mean nothing, but as modern students know them by nothing else than by the names with which they are associated, it detracts largely from the ready use of this work to have to wade through the pages to find what names the author does assign to these well-known operations.

This work is of a style that ought to be encouraged amongst teachers of operative surgery; to show the student that it is not amputations of the thigh and the like that every-day operative surgery means, but all manipulative work that the surgeon in practice has to perform.

The author has attempted a little too much. In future editions he should either omit those subjects that do not come under the category of operative surgery, as mentioned above, or increase the size and scope of the book.

Notes on Diseases of the Testis. By SAMUEL OSBORN, F.R.C.S. London: J. and A. Churchill, New Burlington-street. Pp. 117.

A WORK on diseases of the testicle is ever welcomed by the practical surgeon, in the hope that something new may be found to assist in the diagnosis or treatment of the many forms of diseases to which this organ is liable. The present work, however, turns out to be a condensed summary of the knowledge we already possess. The size of the book prohibits a complete discussion or statement of what we are accustomed to find in the large text-books on the subject.

The anatomical details are at times confusing, especially in reference to the tunica vaginalis; the pathology is a compromise of almost all recognised opinions. Consequently, we search in vain for any new suggestion, or anything to show that the author has ever worked at the subject with the idea of advancing it. The best points in the book are the category of symptoms and of treatment.

Climate and Health in South Africa. By James Bonwick, F.R.G.S. London: S. W. Silver and Co., Sun-court, 67, Cornhill. 1880.

The object of this small pamphlet, as the author explains, is to place before the public the advantages to be found in South Africa by those who are unable to exist under the rigours of the British climate. As a British colony, if only able to present as good a climate as Spain, Italy, Southern France, Algiers, or Madeira, he thinks it should have extra claims upon the attention of English invalids; but since, as he endeavours to demonstrate, the Cape Colony can offer even greater health advantages than either of the above-named places, combined with a residence in a country enjoying British society, customs, and comforts, it only requires such facts to be extensively made known to turn the tide of health-seekers in this direction. The atmospheric conditions and peculiarities of the different districts are very carefully treated of, and all sorts of authorities are extensively quoted, from Peter Kolben and Barrow down to Livingstone; but we imagine that even the increasing facilities of transport will fail, in our day, to make the health-resorts of the Cape serious rivals to the South of Europe, and we might point out to Mr. Bonwick that his present work is only prefatory, and that before invalids could be induced to go so far in search of health it would be necessary that a second edition should be published, giving ample information of the hotel accommodation and other details connected with the different localities he so highly praises.

Annual Report of the Supervising Surgeon-General of the Marine Hospital Service of the United States for the Fiscal Years 1878 *and* 1879. Washington: Government Printing Office. 1879.

In former notices of the Annual Reports of this Service we have pointed out that some of its duties are similar to those undertaken by our own Board of Trade. Amongst other matters, the present Report contains a suggestion that the physical examination of seamen, previous to embarkation, should be made compulsory by law, since, although it is not at present known how large a number of sailors are actually unseaworthy, it is an ascertained fact that at least 40 per cent. are affected with venereal disease in some one of its protean forms. Similarly, Mr. F. W. Lowndes, in his last annual report on the Liverpool Merchant Sailors' Dispensary, expressed an opinion that a medical inspection of seamen at the commencement of each voyage should be instituted, with a view of preserving the health of the crew generally, and insuring efficiency. After endless recommendations from the Supervising Surgeon-General of the Marine Hospital Service on the subject of establishing a hospital at the port of New York, Bedloe's Island was placed at his disposal, and was immediately made available for the treatment of the sick. The Report shows that the examinations for admission to the medical corps of the Service have been growing more rigid each year, as the number of applicants increased, and hygiene and the general principles of hospital construction have been made especially prominent topics, so that the rejections have been 78 per cent. of the whole number examined. Since the last Report the post of Supervising Surgeon-General has been rendered vacant by the death of Mr. John M. Woodworth, and has been filled by the appointment of Mr. John B. Hamilton. Amongst the papers, as usual, published in the appendix to the Report, there are several descriptions of the yellow fever outbreak of 1878.

Indolent Bubo.—Dr. Doering, in the *Chicago Med. Journal*, recommends, as a simple and effectual manner of treating indolent bubo, the introduction of three or four setons through the indolent gland, the material being either stout tape or silver wire, tied in a short loop. This is drawn backwards and forwards twice daily, and covered with a flax-seed poultice. The setons are allowed to remain for seven or ten days, or longer, suppuration occurring generally on the third day with a rapid diminution in the size of the bubo. Fully 80 per cent. of the cases treated have been cured within six weeks after admission. Except at the introduction of the setons, no pain is experienced, and the patient is directed to walk about as much as he likes, to encourage suppuration. —*Louisville Med. News*, April 24.

GENERAL CORRESPONDENCE.

CHIAN TURPENTINE IN CANCER.

Letter from Mr. J. W. Hulke.

[To the Editor of the Medical Times and Gazette.]

Sir,—A letter in your impression of the 15th inst., in which Mr. J. Clay throws doubts on the genuineness of the Chian turpentine used in the trial of this substance as a remedy for uterine cancer now being made in the Middlesex Hospital, appears to demand some notice on our part. The facts are these:—On the publication of Mr. Clay's lecture, recommending Chian turpentine as a remedy in uterine cancer, in the *Lancet* of the 27th ult., my colleagues and self at once prescribed it for several patients labouring under this disease. The drug first used was some which had been long in stock. When this was exhausted, a fresh supply was obtained from a well-known firm. This agreed thoroughly, our dispenser (an experienced officer) assures me, with the characters of Chian turpentine given by Pareira in his "Materia Medica," and it was a sample of this which Mr. Clay pronounces "extremely impure." We are now using other Chian turpentine, obtained from two eminent houses, of a darker colour and firmer consistence than the sample sent by our dispenser to Mr. Clay. It agrees with that with which the trial was begun, and also, as I am informed, with that used by Mr. Clay. The results of this trial will in due time be placed before the profession. I am, &c.,

10, Old Burlington-street, W., May 19. J. W. Hulke.

THE CALCUTTA HOSPITALS.

Letter from Dr. J. Irving.

[To the Editor of the Medical Times and Gazette.]

Sir,—I trust you will allow me space to reply to a letter contained in your issue of the 22nd inst., signed "A Member of the Committee," in answer to one of mine to which you gave a prominent place in your issue of February 14. The first point alluded to by your correspondent is my statement in the *Englishman* (a Calcutta paper) that I had not read the report of the Committee appointed by Sir A. Eden to inquire into hospital expenditure. I quote all that I wrote about this (which it did not suit your correspondent to do). "The author of the articles" [in allusion to some published in the *Englishman*] "appeared to suppose that I had written my report in a spirit of opposition to that of the Committee; but the fact is, I never read that report, though I had to read the resolution on it in order that I might ascertain the orders of Government, and these I endeavoured faithfully to carry out." It would perhaps have been better had I substituted the word *studied* for *read* in the above extract, as more fully conveying my meaning. I intended to imply that my remarks were not meant to be a criticism on the Committee's report, neither did I stand forward as an advocate of profusion or waste in hospitals, but that I did object to the mode in which the Government of Bengal carried out the recommendations of the Committee, and which I stated had introduced a reign of terror among medical officers serving under it. Had the Lieutenant-Governor published a temperate resolution on the Committee's report, all the ill-feeling and dread which have arisen would have been avoided, and much good would have been done. But, instead of this, the resolution published contained vague insinuations, more or less implicating all the hospital officers in a charge of gross carelessness, if not of fraud, and misrepresentations were made of facts sufficient to mislead the public, who necessarily accept as complete and entirely truthful, assertions made in a Government General Order. Your correspondent objects to my remarks as to the constitution of the Committee, but at the same time bears testimony to what I stated as objectionable in its constitution—that all the members were subordinate to the Government of Bengal. He says that the keynote of the Committee's report is found in their first resolution—"That the principle which ought to govern the management of a hospital supported from public funds is the greatest possible economy consistent with the liberal provision of all things necessary to the well-being of

the sick." Everyone will admit the truth of this, I imagine, if carried out in a proper spirit. Your correspondent, however, entirely shirks the real question I have raised, and makes no allusion whatever to the manner in which the new rules as to diet were enforced—a manner which materially interfered with the liberty of hospital officers, and forced them to a degree of economy in excess of what they believed to be the true interests of their patients, preventing them from ordering many trifling indulgences which would have been highly beneficial, though not to be looked upon in the light of absolute necessities. In proof of what I say let me quote from the Supplement to the *Calcutta Gazette* of February 25, in which was a reply to letters of Drs. Chevers and Ewart, and giving letters from various medical officers relative to the new diets. Dr. Raye mentions that at the Medical College Hospital patients receive food from outside, which prevents anyone forming a correct opinion as to the diets, and he adds, "I have not ordered luxuries, and consequently I have been using stimulants much less frequently than in former years." So much the better for the patients, some may say, but the point is that he probably would have done it if he could. Surgeon R. Cobb says of the General Hospital, "On some occasions cases have come before me, in the treatment of which I thought that had greater latitude been permitted me it would have been for the advantage of the sick. Instances have occurred to me in the General Hospital in which considerations of, I will not say economy, but of necessity, have prevented me from ordering things which I thought would perhaps be conducive to the more speedy recovery of my patients. In confirmation of this general statement I may explain that on some occasions I ordered articles of diet, the order for which I was subsequently induced to withdraw on the representation of the Superintendent that I had in those particular cases exceeded the sanctioned dietary allowance." Dr. D. B. Smith, then Principal of the Medical College and First Physician of the M. C. Hospital, gave it as his opinion that the meat and milk issued to the sick were of inferior quality, and he states that patients often complained of the food. Dr. Smith does not approve of rum, which is the standard stimulant allowed for the native cases admitted—"cases in many of which there is immediate danger from exhaustion, and where life may often be saved by well-judged stimulation. The rum now served out is a new spirit, and, in my opinion, unsuitable for such cases. . . . . I have heard it argued that rum is good enough for natives, and that it is much better than anything they are accustomed to. By parity of reasoning it might be considered wrong to give them medicine of really good quality, to say nothing of a scientific dietary, the ministrations of nurses, the supply of beds and blankets, and the general comforts of a hospital, to all of which they are more or less unaccustomed at their homes. . . . . I should like to prescribe brandy instead of rum in all serious cases in the native wards. I should often like to order certain creature comforts and little delicacies, which under the present system I have refrained from giving." Dr. Charles, Professor of Midwifery, writes:—"I coincide generally in Dr. Smith's remarks. I would like to add that very many of the patients have complained of the diets since the allowance was reduced; and, looking at the question from a broader point of view than the one that looks at every item of diet, as being or not being absolutely essential to save life, I would be glad to see the sanctioned allowance raised to the limit advocated by the Principal" (viz., ten annas, or one shilling and threepence for Europeans, and five annas, or sevenpence-halfpenny, for natives). Dr. R. C. Chandra agrees with Dr. Charles. Dr. K. MacLeod approves of the diets now in use, but should like to have the power of ordering brandy occasionally in the cases of natives. He considers second-class meat best for hospital use. Assistant-Surgeon Tamez Khan Bahadour writes of the Campbell Hospital:—"I must state that such extras—stimulants, and so forth—have been held permissible only in those cases where they were *indispensably* requisite for the recovery of such cases." He is of opinion that the articles of diet supplied are not of good quality. Assistant-Surgeon Juggobundo Bose, M.D., objects to rum for the sick, and says that, with the present rates of the market, "it will be difficult to procure the best articles of food within the limit of cost that has been sanctioned by Government for dieting the native sick." Surgeon-Major H. Cayley, of the Mayo Hospital, which is only partially supported by Government, says:—"Meat was given only in very small extent, as meat fit for invalids is expensive." He therefore gives milk, insuring that it is good; and this he finds best suits his patients, who are chiefly Hindoos." He adds:—"I am, however, of opinion that, although the diet supplied was all that was *absolutely necessary*, it might, with advantage, be somewhat improved in quantity and be made more varied to suit the weakened and capricious appetites and cravings of sick people did the funds of the hospital admit of any increased expenditure."

The spirit of the Government orders will be more readily seen if I quote from a resolution dated January 25, 1879. The following principles are laid down, viz.:—"That the maximum limit for European and native diets (inclusive of all extras and stimulants) should be fixed at eight annas, and three annas and six pies respectively; and that each officer should be held personally responsible that these amounts are not exceeded.

"*That medical officers should, if possible, work below those limits*, and not order unnecessary articles on purpose to work up to them, as seems to have been done in some instances. That in any special cases where increased expenditure is unavoidable, the present rule should be maintained, and the amounts be passed on *a certificate on honour* that the expenditure was necessary, *supported by a detailed bill.* That within the prescribed limits the hospital authorities may adopt such modifications of the existing diet-scales as they see fit, and may devote such part of the diet-money as they think necessary to general kitchen expenses, with a view to improve the cooking."

You will thus observe that an average rate was fixed; but the medical officers are told that they were to try and work within it. They were not only distrusted, but put upon honour; and even a certificate on honour was not to be believed! It had to be supported by a detailed bill. Your correspondent says it is natural that you, as a medical journalist, should be prompt to protect medical men from unwarrantable interference with their professional freedom by non-professional people; and, referring to this declaration, I ask what you think of the above principles, which, however, have been sanctioned by medical men in Bengal, whose "official positions show that they were all men of some mark and standing." In this country such rules would not be possible in a public hospital, I should suppose; but in Calcutta there is no option left to medical officers, though many of those concerned, when I was there, felt the degradation to which they were subjected. "A Member of the Committee" confirms the truth of what I said, that the general impression of most of the medical men in Calcutta was that the all-important part of hospital management, in the estimation of Government, was rigid economy. I am not called on to follow him in what he says as to Dr. Chevers and Dr. Ewart, as they are well able to defend themselves. I would, however, merely remark that every expense incurred by them to which exception is now taken was duly sanctioned by proper authority, and that they each frequently received the thanks of Government for their able management of the hospitals under their charge.

Will you allow me to give you some further details illustrative of the spirit in which the Government of Bengal is working the hospitals of Calcutta? Some little time ago the Surgeon-General, Dr. Payne, issued a circular to all the hospital medical officers, calling for their opinions as to the present dietary. I have before quoted extracts from Dr. Smith's reply, which was not favourable, and he also proposed that the rates should be raised. This letter was returned to Dr. Smith for reconsideration, on the ground that it was entirely contrary to what he had told the Lieutenant-Governor whom he had recently seen, and who, Dr. Payne said, had informed him that Dr. Smith was thoroughly satisfied with the dietary. Dr. Smith denied that he had thus expressed himself; and as in his first letter he had forgotten to mention that patients in hospital procured additional food from outside, to the number of about thirty daily, he asked for orders as to whether this practice was to be permitted. After some weeks a reply came from Dr. Payne, to the effect that he hoped Dr. Smith would absolve him from sending on the letter to Government, as its publication would probably reflect upon Dr. Smith's administration, seeing that the results obtained at the Medical College Hospital were no better than at the others—implying that the practice was confined to that Hospital, whereas it was common to every one of them. Dr.

Payne also added that, should he be forced to forward the letter in question, he should, in anticipation, feel compelled to make recommendations which he should be sorry to have to do. On receipt of this threat, Dr. Smith sent in his resignation, adding that he would not be a party to any concealments, as he wished Government to be informed of everything connected with the Hospital, and that he could not think of absolving Dr. Payne from forwarding the letter. The Surgeon-General sent a long reply, beginning by saying that he felt more than surprised at receiving Dr. Smith's resignation, but felt sure that his own letter to him had nothing to do with it. If, however, remarks which he had made, advising him against forwarding his letter, had anything to do with the step he had taken, he was very sorry—all the remarks which he had made being entirely out of respect for him; and he further denied having hinted that the letter should be kept back from Government. Sir A. Eden (Lieutenant-Governor) was very anxious that Dr. Smith should withdraw his resignation, and had an interview with two of Dr. Smith's friends in order to get him to do so. The result of the interview was that Dr. Smith consented to withdraw his resignation if his letters about the diets were not ordered to be cancelled; but this was not conceded, and so Dr. Smith has thrown up his appointment, which was lucrative and one much coveted. He will also, it is said, resign the service.

With one or two exceptions, the public press in India is entirely with Dr. Smith in all that he has done, and his resignation is regarded as "perhaps the most serious blow yet dealt to the new method of saving money by starving hospital patients, introduced by Sir Ashley Eden and Dr. Payne," as the *Statesman* puts it. It is further pointed out that Dr. Smith tried his best to give the new system a fair chance of success, till he found it "impossible for him to resist the evidence of the new diet-rules. He saw the patients were only prevented from suffering from this insufficiency when their friends or relatives were allowed to bring them food from outside."

In conclusion, I would say that it seems very desirable, in the interests of the sick poor of Calcutta, that the whole of the questions which were taken up by the Bengal Hospital Committee should be referred to medical men entirely independent of the Government of Bengal; and this I have some reason to hope may yet be the case.

I am, &c., JAMES IRVING, M.D.,
Late Surgeon-General to the Bengal Government.

London, May 24.

PERIOD OF CONTAGIOUSNESS OF SMALL-POX.—In a clinical lecture by Dr. Alonzo Clark, published in the *New York Med. Record* for May 1, he says:—"There is a point that has not been published in your books, and may be of some use to you. In the experience I had in the New York Hospital, which lasted two years, I saw quite a number of cases that were admitted for fever which turned out to be small-pox, and were sent to the small-pox hospital; and of all these cases not one left the small-pox behind it. No person who assisted the patient, no patient lying alongside of him, took the disease; and a great number of years after, I went to the superintendent of the hospital and asked him what had been the experience after I had left it until then. He said it had been the same. The same is true of Bellevue Hospital. All cases that I have observed there, received in the belief that they had fever, and which were afterwards sent to the small-pox hospital, have not left the disease behind them if they were sent at the time of the beginning of the umbilication of the pustule. My conviction is strong that up to that time there are no emanations from the body that will poison another person. I see the statement made that small-pox is contagious in the stage of attack during the fever. I do not believe it. You will perhaps be sometimes consulted by a person who says, 'I went to see a friend who was sick in bed, and I stood by his bedside for some time, and now they say he had small-pox. What can I do?' 'How long had he been sick when you saw him?' 'Three days—two for the invasion and one for the eruption.' 'It is not, then, contagious, and you need not give yourself any concern about it. If you have had no other exposure, you will not have small-pox.' At the same time he will very likely want you to vaccinate him. Vaccinate by all means, not because he was exposed at that time, but that he may be again."

REPORTS OF SOCIETIES.

THE PATHOLOGICAL SOCIETY.

TUESDAY, MAY 4.

JONATHAN HUTCHINSON, F.R.C.S., President, in the Chair.

CANCRUM ORIS WITH NECROSIS OF LOWER JAW.

MR. H. CRIPPS showed a sequestrum consisting of great part of the inferior maxillary bone of a child two years old, a patient at St. Bartholomew's Hospital. The child had been quite well until a fortnight before admission, when it began to be feverish. On admission there was a large swelling over the right lower jaw. The swelling increased in size, and superficial ulceration set in. Ten days later the entire mass sloughed, and the child died. Post-mortem, the whole structure was found converted into a clay-like substance, and in the *débris* were the remains of the bone. The interest of the case lay in the diagnosis. The ulceration was much slower than in ordinary cases of cancrum oris. There was no history of measles, or of phosphorus-poisoning, or of the child having taken mercury. A favourite cat had suffered, just before the child fell ill, from a swelling of the nose and mouth, for which it was killed, and it was possible that the child had been infected by it.

Mr. MORRANT BAKER had seen the case during life, and agreed with Mr. Cripps that it was not like an ordinary case of cancrum oris.

Dr. DOWSE had seen several cases closely resembling this one. In one family, after measles, three children had had extensive necrosis of the lower jaw, two of the cases being fatal.

Mr. MACNAMARA suggested that the case was one of acute necrosis from periostitis rather than of cancrum oris.

Dr. SHARKEY had seen a case of cancrum oris after measles in which the whole upper jaw on the right side came away in one piece.

Mr. CRIPPS, in reply, could not accept the view put forward by Mr. Macnamara, that the case was one of acute necrosis—using the term in the same sense as applied to acute necrosis of bones of the limbs. In the latter case the necrosis was primary, the bone died rapidly throughout its whole length, and the soft parts were involved at a later period; in the case he had described, the soft parts were first involved, the necrosis spread slowly, and was evidently secondary.

VOLVULUS IN A NEW-BORN INFANT.

Mr. CRIPPS narrated the case of a child who, three days after birth, had passed no motion. On examining the rectum, the finger was stopped an inch within the anus. Thinking that the case was one of imperforate anus, Mr. Willett, under whose care the child was, operated, but without result, the child dying two days later of peritonitis. After death, the rectum was found to be quite patent. The obstruction was situated about two feet above the ileo-cæcal valve, and was found to be due to a volvulus, which could be undone with great ease.

Mr. BAKER stated that he had examined the case, and that he believed a correct diagnosis was impossible during life.

IMPERFORATE RECTUM.

Mr. CRIPPS further showed a specimen of this malformation. When first seen, three days after birth, the child had passed no fæces, but had vomited at intervals. No operation was allowed by the parents at that time; and, a month later, the child was brought to the hospital again in fair health, having passed no fæces, but having gone on relieving the intestine by vomiting. An exploratory incision was then made, but without finding the rectum, and the child died three days later of peritonitis. Post-mortem, it was found that the rectum ended in a large dilated extremity about an inch from the anus, and a *cul-de-sac* passed in for about three-quarters of an inch from the anus, which itself was normally formed. The puncture had passed into the recto-vesical fold of peritoneum; hence the fatal result.

COLLAPSE IN STRANGULATED HERNIA.

The PRESIDENT exhibited a specimen of strangulated femoral hernia from an old lady, whom he had first seen seventy-two hours after strangulation had set in. She had remained

tolerably well till a few hours before, when she got out of bed, and almost directly afterwards became collapsed. After her death it was found that the intestine above the point of strangulation was dilated and intensely congested; below the strangulation it was collapsed and pale. The mesentery connected with the first-mentioned portion was also exceedingly congested. There was no lymph on any part of the gut, and no trace of peritonitis, thus conforming to the rule that peritonitis does not occur in the case of strangulated hernia except after an operation or severe taxis. The cause of death was obscure; it might perhaps be attributed to abdominal shock.

Dr. Samuel West thought the case offered a possible explanation of the cause of shock. There was extreme congestion of an extensive system of veins, which might be looked upon as a bleeding of the rest of the body into the abdominal veins, resulting in syncope.

Dr. Thin suggested that the cause of the congestion of the intestine might perhaps be found in mechanical injury to the capillaries, resulting from the great distension of the bowel, leading to obstruction to the flow of blood.

Diffuse Sarcoma of the Liver in an Infant.

Mr. R. W. Parker showed the liver of a child five weeks old, whose liver occupied nearly the whole abdomen when it was first examined, about three weeks after birth. The surface of the abdomen was irregular over the hepatic region, and it was hard to the touch. The veins of the abdominal wall were enlarged, but there was no ascites, nor was there any jaundice. Post-mortem, the liver weighed thirty-three ounces, and was of a dark plum-colour, and contained a large quantity of blood. The surface was smooth; the capsule not adherent. Diffused through the entire substance was a quantity of new growth, appearing in the form of nodules, varying in size from a millet-seed to a walnut. Microscopically, this was found to consist of round cells about the size of red blood-corpuscles. There was no history of syphilis. A second growth, of a similar nature, was found lying in the adipose tissue between the spleen and the left kidney. He had called it a round-celled sarcoma, but it was possible it might be a syphilitic growth. The existence of a secondary growth, however, argued against the latter hypothesis. The necropsy was confined to the abdominal viscera.

Dr. Pye-Smith thought that the case was one of acute syphilitic infiltration, resembling cases which Dr. Wilks had been the first to describe. The sections were not unlike those found in diffuse interstitial hepatitis, which would probably have its origin in syphilis. He thought it highly improbable that the case was one of primary sarcoma.

Dr. Cory asked whether the spleen was enlarged, as was usually the case in children dying from congenital syphilis.

The President mentioned a case in which the liver was so large as to be an obstruction to labour. In this case there was abundant evidence of syphilis.

Mr. Parker, in reply, said that the spleen was not enlarged. He had inquired carefully of both the father and the mother into the possibility of syphilis. There were no other signs of syphilis in the child, and mercurial inunctions, which had been tried, had not been of any service. He believed that general syphilitic hepatitis was one of the rarities of pathology. On the other hand, he thought that there was nothing unscientific, from the development point of view, in looking upon the growth as a primary sarcoma. (The specimen was referred to the Morbid Growths Committee for further examination.)

Ossifying Chondro-sarcoma of the Leg.

Mr. Parker also exhibited microscopic preparations and drawings of a tumour which had grown in three months in the left leg of a child one year and a half old, involving the knee-joint and the bones above and below it. Before death the right knee had also become affected. After death it was found that the whole length of the femur was involved, except the head and the great trochanter. The tumour was of a tough fibrous structure. There were similar, but smaller, growths in the right leg, and also in the left lung. The left inguinal glands were enlarged. The microscope showed that all the tumours were composed externally of fibrillated cartilage, rich in cells, and continuous with the surrounding tissues. More internally there was a zone of ossifying cartilage, and in the centre the growth was almost entirely composed of bone.

Mr. Pearce Gould asked whether the lymphatic glands contained any real secondary growth. He had seen a somewhat similar case, but in that instance the glands, though enlarged, contained no malignant structure. He would ask whether the tumour grew into the veins, as he had seen this occur in cases of the kind.

Mr. Parker replied that the glands contained growth of the same nature as the bone; but that there was no invasion of the veins by the growth.

Congenital Talipes Varus and Talipes Calcaneus.

Mr. Parker also exhibited these specimens. The talipes varus had occurred in a child who had died immediately after birth. The fibula was situated behind instead of outside the tibia, and the front of the latter bone was overlapped by the muscles of the calf. In the talipes calcaneus, the muscles on the front of the leg were shortened, whilst those on the back were lengthened. The cases were interesting in relation to the causation and the treatment of these affections. He believed that their origin lay rather in a primary malformation of the bones than in paralysis of one set of muscles. He thought that this view was borne out by the twisting of the bones seen in the first case, and the alteration in length of the muscles in the second case.

Mr. W. Adams believed that in these cases the altered arrangements of the bones were more apparent than real; and he did not think there was any primary malformation of the bones. But he was equally indisposed to believe in the existence of a congenital paralysis. There could be no doubt that at birth there is deviation of the bones, but this is not more than would be due to the feet having been in an abnormal position for the last few months of pregnancy. The cause of the abnormal position, he thought, was to be found in a spasmodic action of certain muscles, most probably arising from some morbid nervous condition. He had never known a case of congenital paralysis.

The President asked whether talipes calcaneus was not often met with as the result of paralysis in spina bifida.

Mr. Adams replied that his experience went to show that varus was the most common, and calcaneus the least common, form of clubfoot met with in cases of spina bifida.

Mr. Parker stated, on the other hand, that he had most often met with talipes calcaneus in cases of spina bifida. As regarded the pathology of clubfoot, he thought the mechanical explanation of malposition of the bones, arising most probably from abnormal position of the child in utero, was the simplest. If the origin were primarily nervous, he thought that the disease would be less amenable to treatment than it is.

Sequel of a Case of Syphilitic Gummata.

Mr. Adams then narrated the sequel of a case of syphilitic gummata, recorded by him in vol. xx. of the *Transactions*. The patient lived for seven years afterwards. The tonsils, soft palate, larynx, and pharynx became involved. Tracheotomy was performed, and the patient lived for a year afterwards, dying a few days after the removal of the tube.

The President called attention to the great value of recording the sequelæ of living cases exhibited at the Society.

Micro-photographs of the Blood in Yellow Fever.

Dr. Squire showed a series of photographs of the blood and black vomit of yellow fever patients, and of the air of their ward, taken by Dr. Sternberg, of the United States Army. The red corpuscles were natural, but the white were much altered, containing numerous fatty granules, and closely resembling the corpuscles of patients dying from famine in India, as described by Dr. Cunningham. There were found no microzymes either in the blood or in the air.

Dr. Thin said that he believed that some of the bodies which were described by Dr. Sternberg as fatty granules were in reality organisms allied to micrococci.

Complete Excavation of One Lung.

Dr. Samuel West showed two specimens of this nature. The first was taken from a man who was thought to have localised pneumothorax. He suffered from extreme dyspnœa. There was an almost tympanitic resonance over the left side of the chest, and sounds were produced by succussion. After death, the left lung was found to be converted into an enormous cavity, the wall of which was formed by condensed lung and thickened pleura. There was a singular absence of vascular or bronchial trabeculæ across the cavity. The second specimen was taken from a man who died after profuse hæmop-

tysis. The lung had much the same appearance as that just described, but was filled with recent clot. At one spot an aneurism of the pulmonary artery was found, which appeared to have been divided into two parts, one part having been carried away. Large cavities in the lung were not rare, but it was unusual to find one cavity involving the whole lung from apex to base. The only similar case he had been able to find on record was one described by Rokitansky. In that case also, death had resulted from the rupture of a pulmonary aneurism. In neither case had there been a history of previous illness to account for the cavities.

Acute Fatty Atrophy of the Liver.

Dr. West also showed the liver of a child aged six years, who had been taken ill, six days before being seen, with vomiting, delirium at night, and slight œdema. The child, with another, had eaten something they had picked out of a gutter. The other child had been taken ill in a similar way, but had recovered. When first seen, the child appeared to have meningitis: the head was thrown back; knees drawn up; temperature 101°; rapid respiration and pulse. There was great enlargement of the liver. The child became more œdematous, and the liver rapidly decreased in size. Altered blood was passed by the rectum and blood was vomited. Post-mortem, the lungs were much congested; the heart slightly fatty; the liver weighed sixteen ounces, and was smaller than normal. On section, the outer part of the lobules looked grey, and the inner red. Microscopically, the cells near the outer margin of the lobules were granular; the central cells were converted into fat—each cell presenting all the appearance of a fat globule. The fat had disappeared from the most central cells. The case was evidently one of acute fatty degeneration of the liver—not acute yellow atrophy. There had been no jaundice.

Congenital Malformation of the Arm.

Dr. Allen Sturge showed a man who presented this condition. The left arm was developed normally as far as about two inches below the elbow-joint, where it ended as a roundish stump. The ends of the radius and ulna were pointed, the skin forming a conical projection over the end of the former bone, and being umbilicated over that of the latter. On the flexor aspect of the stump were five little nodules, varying in size from a small pea to a pin's head, the largest being situated towards the radial side, and the smallest towards the ulnar side of the forearm. On the two nodules nearest the radial side were well-developed nails, showing that the five nodules represented the five fingers. The stump could be flexed and extended upon the arm, and pronation and supination could also be effected. This variety of malformation had been described by Sir James Simpson, who looked upon it as due to intra-uterine amputation, with attempted reproduction of the fingers. Dr. Sturge thought that it was quite as likely to be due to arrested development, resulting either from a morbid tendency to growth in the embryo, or from accident leading to destruction of those cells in the blastoderma from which the forearm should have been developed.

The following specimens were exhibited by card:—

1. By Mr. William Adams—Tendo Achillis divided in a case of Pseudo-hypertrophic Paralysis.
2. By Dr. Orlebar—Aneurism of Aortic Arch, rupturing into Trachea.
3. By the President—(1) Drawings of two cases of "Cockscomb" Nævus; (2) Drawings showing the results of Osteitis and Periostitis in Congenital Syphilis.
4. By Dr. Abercrombie—Skull, showing the result of Congenital Syphilis.

Mr. R. W. Parker also exhibited, in the ante-room, a young child presenting in the back a Cyst which had previously been punctured, but had recently developed again very rapidly.

Dr. Heneage Gibbes also exhibited a complete longitudinal section of the whole length of a Kidney. The specimen was double-stained, and in it the renal tubes could be traced from he glomeruli to the papillæ. The beautiful and instructive section had been cut with a microtome.

The Lords of the Treasury have refused a loan of £100,000 to the Corporation of Dublin for paving the city.

CLINICAL SOCIETY OF LONDON.

Friday, May 21.

E. Headlam Greenhow, M.D., F.R.S., President, in the Chair.

(*Concluded from page 570.*)

Ten Cases of Rheumatic Fever treated with Salicin, by Dr. Greenhow.

The author states that for some years past he has been in the habit of testing carefully and methodically in a series of cases the several remedies from time to time proposed for the treatment of rheumatic fever. During the last three years he had treated, in the Middlesex Hospital, ten cases with salicin and fifty with salicylate of soda. All the patients were confined to bed until the fever had entirely subsided. The diet consisted of milk, beef-tea, and sometimes eggs; stimulants were sparingly given. The affected joints were wrapped in cotton-wool, and when pericarditis or endocarditis was present, belladonna and iodide of potassium ointment was applied over the præcordia. In most cases simple effervescing medicine was prescribed on the day of admission, and an aperient and occasionally sedatives were given, but the latter as seldom as possible. In all the cases treated with salicin, and in many of those treated with salicylate of soda, the urine was examined the day after beginning the medicine, and found invariably to yield the characteristic reaction with perchloride of iron. In order to exclude cases of mild type, which, especially in young subjects, rapidly improve under any kind of treatment, the salicin or salicylate was not prescribed until the patient had been from twenty-four to thirty-six hours in the wards. Case 1: First attack; incipient pericarditis; salicin in full doses on day after admission. Temperature began to fall on third day, became normal on sixth. Pains abated on second day and ceased on fifth. The salicin taken every two hours for six days, then for two days every four hours, and for nine days every six hours. A mild relapse occurred whilst taking the drug. Epistaxis occurred in this case; and the heart's action became feeble, requiring stimulants. Discharged on sixty-sixth day. Case 2: Sixth attack; admitted on fourteenth day; mitral disease and pericarditis. Pain diminished on second day of treatment, ceased on sixth day. Temperature fell on third day and became normal on fifth. Salicin given every two hours for six days, then every four hours, but a relapse occurring, the frequency was again increased to two hours. Vomiting and headache became so severe that at the end of ten days more the drug was discontinued. Pleurisy and a second attack of pericarditis occurred. Discharged on 107th day. Case 3: First attack; ailing several weeks; pericarditis. Pains rapidly subsided, and temperature became normal on fourth day of taking the drug, but cardiac failure was very marked, and the salicin was discontinued on the eighth day. Discharged, with an open systolic murmur, on twenty-fifth day. Case 4: Third attack; old mitral disease and a recent basic murmur. Pericarditis supervened two days after salicin commenced; the temperature soon fell to normal, but pains and sweating did not subside with it. A mild relapse occurred after the salicin was discontinued. Iodide of potassium was given, and patient discharged on fifty-eighth day. Case 5: Third attack; relapse: pericarditis. Temperature normal, and pains greatly subsided on fourth day. Epistaxis supervened and pulse became small and feeble on the third day. Discharged on twentieth day. Case 6: First attack. Temperature fell to normal and pains subsided after two days' treatment, but pericarditis developed. Pulse became very feeble; vomiting and epigastric pain occurred nine days after commencement of treatment, unrelieved by reduction in frequency of the drug, which was discontinued on the eleventh day. A relapse occurred, but salicin was not prescribed again. Discharged on forty-sixth day. Case 7: First attack; third day. Temperature fell to normal on third day of treatment; pains and sweating subsided more slowly. Salicin continued till twenty-third day, and patient discharged on forty-fifth day. Case 8: Second attack; tenth day. Temperature fell to normal and pains subsided within thirty-six hours from commencing to take salicin, which, at first given every two hours, was afterwards reduced, owing to feebleness of pulse, and omitted on the twelfth day. Discharged on the twenty-third day. Case 9:

Second attack; third day; complicated with pneumonia. Temperature excessive on tenth day; pains continued a day or two longer. Sounds and impulse of heart became very feeble on twelfth day. Discharged on thirty-third day. Case 10: Second attack; sixth day. Double pneumonia and hæmaturia, endocarditis and pleuro-pericarditis. Pains in joints disappeared on the seventh day of treatment, but temperature remained high until after the salicin had been discontinued, on account of persistent and uncontrollable sickness. Chloral and morphia were required frequently at night, and stimulants were freely given on account of the dyspnœa and feeble, irregular action of the heart. Twenty grains of salicin were given every two hours for seventeen days. It caused sickness at a very early period, and after a few days dryness and soreness of throat; discharged on fifty-eighth day. Thus the effects of the drug were not very satisfactory. The temperature appeared to be reduced, and the pains to subside, in the uncomplicated cases; but in Cases 1, 2, 4, and 6 relapses occurred when the salicin was either discontinued or the frequency of the dose diminished. Case 5, one of relapse, had already been laid up some time, and recovery might have been as rapid under simple rest and dict; while in Cases 9 and 10, complicated with pneumonia, the salicin did not appear to exert any influence on their progress. On the other hand, salicin appeared to produce some inconvenient consequences. In one case epistaxis, which recurred when the dose was increased; in four cases marked cardiac depression; nausea and vomiting in two cases. Lastly, the detention of patients in hospital was not shortened by the treatment, for except Cases 3, 5, and 8, two of which were approaching their close when admitted, the patients treated with salicin recovered more slowly than is common in cases of similar severity under other modes of treatment.

Cases of Rheumatic Fever treated with Salicylate of Soda, by Dr. Greenhow.

These cases were fifty in number, and abstracts of a few of them were read. It would be impossible to reproduce these abstracts here, but we may give the conclusions arrived at by the author. He discusses, firstly, the physiological effects of salicylate of soda, and then the therapeutical effects. One of the most obvious effects of the treatment in the majority of cases was a speedy fall in temperature, sometimes within a few hours from commencing the treatment; and, save in a few cases, within two or three days. The pulse usually, but not invariably, came down in frequency with the fall of temperature. In forty-five out of the fifty cases certain well-marked physiological symptoms attended the reduction of the fever. There were effects on the nervous system, such as deafness, vertigo, headache, noises in the ears, delirium, and hallucinations. Deafness often occurred early, and was noticed in twenty-seven cases. Sometimes it was very intense. Vertigo occurred in fourteen cases. Very intense headache, chiefly frontal, though less frequent than deafness and vertigo, was, when it occurred, a much more distressing symptom. It was complained of in nine cases, and in one recurred until the resumption of the medicine. Delirium was present in eight cases; hallucinations in four. Great depression of pulse and action of the heart was the most important effect produced on the circulation—more or less weakening of the pulse calling for stimulants in almost every case; great weakening of the impulse of the heart, and in ten cases almost complete obliteration of the first sound; pulse irregular and dicrotous in some. Vomiting occurred in twenty-two cases; great injection of the tongue in many cases; soreness of the tongue in three; and an aphthous state of the tongue in three cases. Diarrhœa in two cases was evidently referable to the salicylate. Epistaxis occurred in seven cases. In two transient albuminuria was observed, in two others tremor of the hand or tongue, which may not have been due to the drug. Speaking of the value of salicin and salicylate of soda in the treatment of rheumatic fever, Dr. Greenhow said that his experience led him to regard these as the most powerful antipyretic agents with which he was acquainted. The temperature soon falls under their use; the pulse commonly falls at the same time, and the pains soon abate very considerably, and in most cases entirely cease within a few days. But the improvement in the symptoms only takes place coincidentally with the development of one or more of the physiological phenomena already described, and in all the most acute cases the relief derived from the medicine passed away soon after the treatment was intermitted, and a relapse—in some cases several relapses—took place. On this ground these agents cannot be regarded as in any respect specifics in the treatment of rheumatic fever. Excluding 2 cases which passed into the state of hyperpyrexia whilst under the physiological influence of salicylate of soda, 2 other cases which proved fatal, and about 14 very mild cases from which no conclusions could be drawn, there were relapses in 21 out of the remaining 32 cases. In 7 of these 21 cases there was one relapse, in 9 there were two, in 2 there were three, in another 2 four, and in 1 five relapses. A proportion of 21 out of 32 was a large one for relapsing cases; and in most of the cases the relapse was due to the passing off of the influence of the medicine. The paper concluded: "Fully admitting, therefore, the great immediate relief that appears to follow the use of these agents in the treatment of rheumatic fever, there still remains for consideration the further question, whether, upon the whole, the treatment is successful. The answer must depend upon whether the complications which are apt to arise in rheumatic fever are less frequent under this treatment; whether the condition of the patient after recovery is better or worse than under other modes of treatment; and lastly, whether the length of time during which the patient is disabled is shorter or longer under this than under other modes of treatment. To all these questions my experience leads me to reply in the negative. We might have, perhaps, expected that hyperpyrexia, at least, would have been prevented by the use of such a powerful antipyretic agent, but the two first cases I have recorded negative this expectation, for hyperpyrexia was developed in both of these after the proper physiological influence of the salicylate of soda had become manifest. Pericarditis was present in many cases before the treatment was commenced, but in several instances it improved afterwards. In three cases pneumonia, and in four others pleurisy, supervened when the physiological effects of the medicine had become manifest. On the other hand, several cases that were admitted with either pleuro-pneumonia, broncho-pneumonia, or bronchitis ran very much the course we are accustomed to witness in similar cases under other treatment. Patients treated with salicylate of soda appeared to me to become unusually anæmic, and to regain health and strength very slowly. They are long in becoming fit to resume their occupations, and their recovery has appeared to me more tedious than has been the case with patients treated on other methods. Excluding the two cases of hyperpyrexia, the two fatal cases, and nine very mild cases, which were on the average less than twenty days in the hospital, and perhaps recurred neither more quickly nor more slowly than such cases commonly do, I find that the remaining thirty-seven cases were on an average fifty-seven days each in the hospital. This period, however, by no means represents the duration of their disabling illness, for all had been at least a few days ill previous to admission, and probably never were discharged in a condition to resume work, many having been sent to convalescent hospitals, and others to their friends in the country to recruit. If now we examine into the duration in hospital of the cases treated with salicin, a very similar result is shown. Two cases which were admitted in an advanced stage of their illness being excluded, the average residence in hospital of each of the remaining eight cases was fifty-five days. With regard, therefore, to the treatment of rheumatic fever with salicin and salicylate of soda, we must, I think, come to the conclusion that most physicians did with regard to the treatment with blisters, viz., that the pain and distress of the patients are undoubtedly for a time greatly assuaged, but that the duration of the illness is not shortened. Of the two plans I am of opinion that blisters applied in the vicinity of all the painful joints are by far the most efficacious and speedy in the relief they afford, and have the advantage of not producing so much subsequent debility. Another question now presents itself for our consideration, namely, whether it is not possible that some injurious consequence may result from the powerful action of the medicine upon the heart; and I am bound to confess my fears that the marked weakening of the first sound of the heart, present in so many cases, indicates the exertion of an influence upon the muscular structures of that organ which may not always pass entirely away when the treatment is suspended, and more particularly when either inflammation of the endocardium or pericardium, or of the muscular structure itself, exists during the treatment."

Dr. Silver said that the value of the papers could not easily be over-estimated; they constituted a kind of standpoint for future progress in the treatment of acute rheu-

matism. He had seen many cases of this kind, and his views exactly coincided with those of the President as to the action and effects of the salicylate. When given in doses of fifteen grains every four hours it almost invariably reduced temperature and relieved pain within two or three days at the outside. But there he believed its function and its usefulness ended. If continued the patient did not improve, and there was great risk of relapse. His constant practice, therefore, was to discontinue its use as soon as the pain and fever had disappeared, and to substitute for it the potash treatment, coupled as soon as possible with the use of quinine. The paper would be a notable one in the annals of the Society, the more especially as the Society had been specially intended to carry out therapeutic investigation.

Dr. Davy had seen twenty or thirty cases treated in various ways, but his impression was that neither salicin nor salicylate prevented complications, though they reduced temperature and relieved pain. He had used salicin in some cases where salicylate of soda did not suit. He had seen hallucinations with its use.

Dr. Hermann Weber had in a paper read before the Society expressed himself as greatly in favour of the drug. With it complications were not so frequent. Above all, he had seen with it no hyperpyrexia. He had never seen the iron reaction in the urine. He was sure it did not act by reducing the heart's action alone, but perhaps by arresting some kind of fermentation in the blood. It diminished sugar in diabetes, and arrested any process whereby bacteria were rapidly produced in the urine.

Dr. Cavafy had used the drug since 1876, and often given it in half-drachm doses every two hours, gradually diminishing the quantity administered. The undoubted improvement effected by it does not date from the toxic phenomena, for these are seldom seen; these symptoms may be very unpleasant, but are not grave, and he had seen no serious result from them. The albuminuria spoken of must depend on something else. Relapses do not occur if small doses are continued after the first full ones have exerted their effect. As a rule, recovery was not tedious: he had seen many patients out of bed in five days. The weakening of the first sound of the heart might be due to pyrexial conditions.

Dr. Hewan had tried salicin and salicylate in his own case. It always produced sickness, and had not given him confidence in its use. In his own case he had recently used salicylate of quinine, under which he recovered rapidly.

Dr. Burdon Sanderson said that it was in 1872 that the salicylate was introduced. Binz first showed that quinine was a powerful antiseptic and reduced temperature. Next it was found that the salicylate was even more powerful. He himself had been one of the first to speak of it in this country.

Dr. Dyce Duckworth, whilst admitting that salicylate was of great value, contended that it was no specific, but with it the urgent symptoms were speedily relieved. He would then reduce the dose and give good diet. He had good faith in alkalies, but he was now prepared to advocate the use of the salicylate of soda.

Dr. Douglas Powell thought that thirty grains was rather too large a dose. He would not give more than fifteen. When it is used, some of the tissues, notably the lungs, resisted decomposition.

Dr. F. Taylor, with reference to the remarks made by Dr. Silver, said that in many cases the temperature fell of its own accord in a day or two.

Dr. Silver explained that he was perfectly cognisant of these cases, but did not include them in his remarks. Often without any treatment the temperature would be high the morning after admission, and fall immediately afterwards. The element of pain had also to be borne in mind.

The President, in reply, said that in this matter of the treatment of rheumatic fever he was willing to try all plans, and had no preconceived ideas on the subject. The papers were based entirely on his own experience. He thought rest and diet the great things. The diet should be carefully attended to, as slight carelessness often led to relapse. He had given no opinion as to the mode of action of the drug—he had only given results. Its prolonged use was likely to be injurious where the heart was affected. The ultimate results obtained by employing the salicylate were not satisfactory. Small doses—say five grains every two hours—frequently repeated suited better than large ones, but continuing such small doses did not prevent relapse. He was still in favour of blisters in the neighbourhood of the joint.

NEW INVENTIONS AND IMPROVEMENTS.

BENHAM'S STEAM ANTISEPTIC SPRAY PRODUCER.

This new carbolic steam spray producer, manufactured by Messrs. C. Wright and Co., of 108, New Bond-street, W., is especially worthy of notice on account of its low price, as compared with other forms of apparatus of the kind, as well as its efficiency and portability. It is composed wholly of metal, and is provided with a good and efficient safety-valve and a glass gauge for showing the height of the water in the boiler. The handle is of a convenient shape, and as the apparatus is light it can be held for a considerable time without tiring the hand. When the boiler is nearly filled at the commencement the spray will work for upwards of an hour. Mr. James Rouse, of St. George's Hospital, writes to us that he has "already effected numerous successful operations on the antiseptic method with the aid of these sprays, and is able to recommend them to the profession with every confidence"; and having had the apparatus tried, we also

can say that it is good, very portable, and well adapted for hospital or private practice, for operating, or for dressing wounds and injuries; and its price, only 15s. 6d., ought to command for it a large sale. We would, however, suggest that the instrument would be made still more generally useful and handy by the addition, at even a slight increase of cost, of a means of temporarily shutting off the jet of spray, and of varying the direction of it without tipping the instrument. At present, if the apparatus is inclined upwards or downwards there is a risk of spilling some of the contents of the carbolic-fluid bottle.

CHRISMA, A NEW BASIS FOR OINTMENT.

From Allen and Hanburys, of Plough-court, E.C., we have received a sample of their product Chrisma, a new form of perfectly neutral solid hydrocarbon derived from crude petroleum. Other substances of this class, as vaseline and ozokerine, are, we need not say, well known and largely used. Like them, Chrisma possesses considerable emollient and healing properties; while as it cannot become rancid, it may with great advantage be employed as a basis for ointments, pomades, etc., and will be found very serviceable as a non-irritant application to inflamed surfaces. But it has some special excellences of its own: it is absolutely free from taste and smell; is of about the consistence of lard; and is cheap, being scarcely more expensive than lard. We have no hesitation in recommending the preparation to the profession.

COD-LIVER OIL EMULSION.

This is a very well made emulsion composed of the finest cod-liver oil, pepsine, and hypophosphite of lime—all medicines of proved value. The emulsion is quite free from disagreeable taste and smell, the cod-oil being well disguised, so that it can be easily taken, and retained. Its remedial virtues must be considerable, and the addition of pepsin and hypophosphite of lime must increase, not a little, its value as a nutritive and restorative. The dose is a small teaspoonful twice a day, and may be gradually increased. Children will take it readily by itself or in milk.

The emulsion is prepared by George E. Broomhead, of Union-place, Aberdeen, and may be obtained in London from Messrs. Young and Postans, of 35, Baker-street, Portman-square, W.

IMPERIAL RIESLING WINES.

Mr. Max Greger, to whom the public are indebted for making them acquainted with, and enabling them to enjoy at moderate prices many of the pleasant, pure, and valuable wines of Hungary, is now introducing into England the wines made on the Bellye estates of the Archduke Albrecht, of Austria. Some fifty years ago the Archduke imported specimens of the Riesling grape from Johannisberg, and finding that they grew vigorously and richly in the soil of his Villany and Bellye estates, has had all possible care and skill given to the cultivation of the vines, and to the manufacture of wines from the grapes. These wines (red and white) Mr. Max Greger now introduces under the name of the "Bellye Riesling" Wines. They are pleasant, clean, pure, light wines, of delicate flavour and bouquet, and they are likely to gain repute as safe and satisfactory dietetic alcoholic stimulants and restoratives, costing from 24s. to 36s. the dozen. One of the red wines—Château Bellye—is a high-class wine for after-dinner use, and commands, of course, a higher price. We may add that the Riesling wines are strongly recommended by the Chevalier Dr. Von Schmerling as being eminently useful in cases of gouty and rheumatic diathesis; and that Mr. Max Greger has secured the concession of the entire surplus produce of the wines of the Bellye estates for six years.

MEDICAL NEWS.

Royal College of Surgeons of England.—The following gentlemen having undergone the necessary examinations at a meeting of the Court of Examiners on the 20th inst., were admitted Members of the College, viz.:—

Cox, William L., Abbey-gardens, S.W., student of St. Mary's Hospital.
Culling, John C., West Lydford, Somerset, of the Charing-cross Hospital.
Day, Donald D., Blackheath, of St. Bartholomew's Hospital.
Evans, William G., Sutton, Shropshire, of King's College Hospital.
Gray, Walter, Old Charlton, of Guy's Hospital.
Hume, Walter A., Hounslow, of St. Bartholomew's Hospital.
Innes, Henry J. D., Barnes, S.W., of St. George's Hospital.
Murray, Hubert M., Haverstock-hill, of University College Hospital.
Nicholls, John M., Hayle, Cornwall, of St. Bartholomew's Hospital.
Poulton, Benjamin, Melbourne, Australia, of St. George's Hospital.
Rees, Albert H., Swansea, of University College Hospital.
Rusher, James B., Pershore, Worcester, of St. Bartholomew's Hospital.
Sparrow, Horatio S. R., Southsea, of King's College Hospital.
Wilkinson, Francis T., Lewisham, of Guy's Hospital.

Four gentlemen were approved in surgery, and when qualified in medicine will be admitted Members of the College; and eleven candidates having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their professional studies for six months.

At the half-yearly Primary Examination in Anatomy and Physiology for the Fellowship of the College on the 24th inst., the following gentlemen were successful, viz.:—

Bass, Frederick, student of St. Bartholomew's Hospital.
Briggs, Henry, M.D. Edin., of the Manchester School, diploma of membership dated July, 1877.
Clippingdale, Samuel Dodd, M.D. Aberd., of the London Hospital, July 10, 1875.
Fraser, Alexander, of the Glasgow and Manchester Schools.
Lloyd, George Jordan, L.S.A., of the Birmingham School, Nov. 29, 1879.
Perks, Robert Howell, of Guy's Hospital.
Pike, Charles James, of University College Hospital.
Price, John Alfred Parry, of Guy's Hospital.
Steinthal, George James Haslam, of the Manchester School.
Walker, Basil Woodd, of the London Hospital, January 26, 1877.

Ten candidates were rejected. The following gentlemen passed on the 25th inst., viz.:—

Booth, Edward Hargrave, student of Guy's Hopital.
Crookshank, Edgar March, of King's College Hospital.
Eastes, Frederick, of Guy's Hospital.
McDonnell, James O'Malley, of the Dublin and St. Thomas's Hospitals.
Martin, Sidney Harris Cox, of University College Hospital.
Moline, Paul Frank, of University College Hospital.
Morton, Charles Alexander, of St. Bartholomew's Hospital.
Paterson, William Bromfield, of St. Bartholomew's Hospital.
Robinson, William, of the Newcastle-on-Tyne School.
Shorthouse, William Stanley Neville, of Guy's Hospital.
Thomson, St. Clair, of King's College Hospital.
Waldy, John, of the Newcastle-on-Tyne School.
Woodhead, German Sims, of the Edinburgh School.

Seven candidates were rejected. The following gentlemen passed on the 26th inst., viz.:—

Back, Herbert H., student of St. Bartholomew's Hospital.
Bailey, Charles F., of St. Bartholomew's Hospital.
Blatherwick, Henry, of Guy's Hospital.
Crick, William T., of St. Thomas's Hospital.
Dendy, Walter C., of Guy's Hospital.
Evans, Charles S., of St. Thomas's Hospital.
Hewkley, Frank, of the London Hospital.
Pounds, Thomas H., of the Charing-cross Hospital.
Spicer, Robert H. S., of St. Mary's Hospital.
Tait, Henry B., of St. Bartholomew's Hospital.
Wray, C., of the London Hospital and Newcastle-on-Tyne School.

Nine candidates were rejected.

Collegiate Examinations.—At the pass examination for the diploma of Membership of the Royal College of Surgeons just concluded there were eighty-four candidates, of whom thirty-six were referred to their studies for an additional period; and four passed in surgery, and will be admitted Members when qualified in medicine. At the last primary examination in Anatomy and Physiology 157 candidates presented themselves, of which number sixty-one failed to acquit themselves to the satisfaction of the Board of Examiners, and were referred to their studies for three months, including eight who had an additional three months.

Fellowship Examination.—At the half-yearly primary examination for the Fellowship of the Royal College of Surgeons, which was commenced on the 21st inst., sixty-eight candidates presented themselves, of whom twenty-six were rejected. The following questions on Anatomy were submitted, when three out of the four questions were required to be answered, viz.:—1. Describe the peculiarities of the skull at birth. 2. Give a dissection to expose the glosso-pharyngeal nerve from its exit at the base of the skull to its termination. Describe the distribution and connexions of the entire nerve. 3. Give the attachments and actions of the deltoid muscle, and the arrangement of its muscular fasciculi and tendons. Describe the structures exposed upon removal of the muscle. 4. The left innominate bone being removed, describe the dissection necessary to expose the anterior primary branches of the sacral nerves, with their distribution and connexions inside the pelvis. The following were the questions on Physiology, when again three out of the four questions were required to be answered, viz.:—1. Give an account of the development of the eye. 2. Describe the minute structure of the pancreas. State the mode in which a proteid-digesting extract may be obtained from a perfectly fresh pancreas. How does the action of such an extract differ from that of a proteid-digesting extract of the gastric mucous membrane? 3. Give an account of the changes that take place in the uterus during pregnancy, and describe the mode of formation of the placenta and of the membranes enclosing the fœtus. 4. Describe the structure of striated muscular tissue, and the phenomena attendant upon its contraction.

Clinical Examinations.—At the last pass examination for the Membership of the Royal College of Surgeons there were some very good clinical cases on which the candidates were examined; and selected from the following hospitals—viz., St. Bartholomew's, Guy's, St. Mary's, University College, St. George's, King's College, Middlesex, Charing-cross, Moorfields Ophthalmic, etc. The cases consisted of abscess in loin; strumous periostitis; chronic inflammation of wrist; enlarged carpal bursa; gonorrhœa and orchitis in a boy of fourteen; iritis, hernia, and scabies in same patient; varicocele; sarcoma in axilla; epithelioma of cheek and lips; rodent ulcer of temple; enlarged testicles; acute periostitis; strumous disease of testicle; cicatrix after epithelioma, and eversion of lower eyelid; disease of upper jaw-bone; facial paralysis; chronic inflammation of right elbow, subsequent to injury; hydrocele; gouty effusion into knee-joint; enlarged cervical glands, with protrusion of eyeball in same patient; ulceration of frænum linguæ; strumous disease of elbow-joint; bursæ enlarged and indurated on nates, commonly known as "weaver's bottom"; paralysis of muscles of shoulder and upper arm; pustular eruption (herpetic) on face; strumous disease of testicles; syphilitic ulceration of lips and cheek.

Apothecaries' Hall, London.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, May 20:—

Davies, Rees Thomas Edward, Millfield-park, Aberdour.
Otway, Charles John Carrol, Kennington-park-road.
Wigg, Alfred Edgar, Adelaide, South Australia.

The following gentleman also on the same day passed his Primary Professional Examination :—

Longman, Arthur, St. Thomas's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to all new Appointments that take place.

Castle, H., M.R.C.S., L.S.A.—Resident Accoucheur to St. Thomas's Hospital.

Lunn, J. R., M.R.C.S., L.R.C.P., L.S.A.—Assistant House-Physician to St. Thomas's Hospital.

Savill, T. D., M.R.C.S., L.S.A.—Assistant House-Physician to St. Thomas's Hospital.

Thomas, W. Hugh, M.R.C.S., L.S.A.—Medical Officer to the Marston-green Cottage Homes, Birmingham.

Walters, F. R., M.R.C.S., L.S.A.—Assistant House-Surgeon to St. Thomas's Hospital.

BIRTHS.

Bott.—On May 22, at Brentford, the wife of Henry Bott, L.R.C.P., M.R.C.S., of a daughter.

Elliott.—On May 23, at Redland, Bristol, the wife of Christopher Elliott, M.D., of a daughter.

Farmer.—On May 19, at Hexham, the wife of Cottenham Farmer, L.R.C.P., of a son.

Fraser.—On May 15, at 37, Melville-street, Edinburgh, the wife of T. R. Fraser, M.D., F.R.S., Professor of Materia Medica in the University of Edinburgh, of a son.

Lloyd.—On May 23, at Pleasant-place, Brook-street, Kennington, the wife of Robert H. Lloyd, M.D., Medical Superintendent of Lambeth Infirmary, of a son.

Mackenzie.—On May 24, at 26, Finsbury-square, the wife of Stephen Mackenzie, M.D., F.R.C.P., of a son.

Ormerod.—On May 18, at 25, Upper Wimpole-street, Cavendish-square, the wife of Joseph Arderne Ormerod, M.B., of a son.

Rayner.—On May 20, at Tiviotdale, Stockport, the wife of Edwin Rayner, M.D., F.R.C.S., of a son.

Spencer.—On May 17, at Albion-road, Stoke Newington, the wife of E. R. Spencer, L.R.C.P., M.R.C.S., of a daughter.

MARRIAGES.

Eastes—Rumboll.—On May 19, at Thorpe-le-Soken, Essex, Thomas Eastes, M.D., to Alice Elizabeth, second daughter of the Rev. A. H. Rumboll, M.A., Vicar of Thorpe.

Lang—Colman.—On May 22, at Munster-square, Henry Charles Lang, M.D., F.L.S., of 41, Berners-street, Oxford-street, W., to Rose Gertrude, youngest daughter of George Augustus Colman, Esq., of 70, Adelaide-road, South Hampstead.

Trevor—Hensley.—On May 20, at Walcot, Bath, the Rev. G. W. Trevor, M.A., Rector of Marton-in-Cleveland, Yorkshire, to Arabella Frances, youngest daughter of Henry Hensley, M.D., of Bath.

DEATHS.

Edwards, John May, L.R.C.P., at 8, Tower-street, King's Lynn, on May 16, aged 62.

Haliday, Alicia Teresa, daughter of E. Haliday, L.R.C.S., late of Dublin, at 27, Rue de Sèvres, Paris, on May 5.

Payne, Charles William, M.R.C.S., L.S.A., late of Hoxne, Suffolk, at the College, Northfleet, on May 21, aged 74.

Umpleby, Mary, wife of Henry Umpleby, M.D., at Bedale, on May 22, aged 77.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

Belgrave Hospital for Children, 79, Gloucester-street, S.W.—Physician. Candidates, who must be graduates in medicine of a British university, and Fellows or Members of the Royal College of Physicians, are requested to communicate, in writing, with the Hon. Secretary, at the Hospital, on or before May 31.

Belgrave Hospital for Children, 79, Gloucester-street, S.W.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to be sent to the Hon. Secretary, at the Hospital, on or before May 31.

East Riding Lunatic Asylum.—Assistant Medical Officer. Candidates must be under thirty years of age and unmarried. Applications, with testimonials, to be sent to Edmund B. Whitcombe, Esq., Medical Superintendent, not later than June 18.

Kirkmichael (Parish of), Banffshire.—Medical Officer. For particulars apply to Mr. James Easson, Teacher, Tomintoul.

Royal Albert Edward Infirmary and Dispensary, Wigan.—Junior House-Surgeon. Candidates must have two qualifications, and be prepared to enter into an agreement not to practise in the Wigan Union for a period of three years. Applications, stating qualifications, etc., with testimonials, to be sent to the Secretary, Will Taberner, Esq., on or before May 29.

Sheffield Friendly Societies' Medical Institution.—Senior Medical Officer. Salary £200 per annum and residence. Also a duly qualified Junior. Applications, with testimonials, to be sent to the Secretary, 308, Shales Moor, Sheffield.

Whitehaven and West Cumberland Infirmary and Fever Hospital.—House-Surgeon. Applications, with testimonials (prepaid), to be made to the Secretary, Mr. J. A. Knight, before June 25.

Wonford House Hospital for the Insane, Exeter.—Assistant Medical Officer. Candidates must be fully qualified. Further particulars can be obtained from Dr. Phillips, Medical Superintendent, Wonford House, Exeter, to whom applications, with testimonials, are to be sent not later than June 1.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Bideford Union.—Mr. Ezekiel Rouse has resigned the Abbotsham District: area 1758; population 421; salary £7 7s. per annum. Mr. Thomas G. B. Hutton has resigned the Hartland and Clovelly Districts: area 21,953; population 2862; salary £75 per annum.

Huddersfield Union.—The Paddock District is vacant by the resignation of Dr. George Wilson: salary £12 per annum.

Hunslet Union.—The First District is vacant: area 550; population 19,000; salary £50 per annum.

Newport Union, Mon.—The Marshfield District is vacant by the death of Mr. John Brizzel: area 13,579; population 1882; salary £40 per annum.

Oundle Union.—Mr. Edward Greaves has resigned the Weldon District.

Pontefract Union.—Mr. W. S. Simpson has resigned the Workhouse: salary £50 per annum. Also the First District: area 7201; population 7554; salary £43 per annum.

Selby Union.—Dr. Alexander Cuthill Gray, Medical Officer for the Workhouse and the Selby District, is deceased: salary for Workhouse £32 per annum; area 23,760; population 10,043; salary for District £48 per annum.

APPOINTMENTS.

Newbury.—John Shea, M.D., as Analyst for the Borough.

Pontypridd Union.—R. G. Price, L.R.C.P. Edin., L.F.P. & S. Glasg., to the Ystradyfodwg Upper District.

St. Austell Union.—R. F. Stephens, M.R.C.S. Eng., L.S.A., to the First District and the Workhouse.

St. George-in-the-East Parish.—Brougham Robert Rygate, M.B. Durh., M.R.C.S.E., L.S.A. Lond., to the North District.

Wantage Union.—Croft G. Symons, M.R.C.S. Eng., L.S.A., to the Hendred District.

By invitation of the authorities at the Royal Indian Engineering College, Cooper's Hill, Staines, Sir Joseph Fayrer, K.C.S.I., M.D., F.R.S., recently delivered a lecture "On the Preservation of Health in India." The lecture was so thoroughly to the purpose that special request was made for its publication for the general benefit of all persons interested in our Indian Empire. It is now in the press, and will be issued in pamphlet form by Messrs. Kerby and Endean, of Oxford-street.

Elastic Ligature for the Funis.—Dr. Whitney writes to the *Boston Med. Jour.*, April 22, that he has seen the statement that Dr. Budin, of Paris, uses caoutchouc thread as ligature for the funis when bleeding is feared; and adds that for years he has used for this purpose the ordinary india-rubber bands sold by stationers, placing them around the cord twice or more times according to its size. The band tightens as the Wharton jelly issues and the cord becomes smaller.

Health of the Dublin Police Force.—The report of Mr. Thomas Nedley on the health of the Dublin Metropolitan Police for the year 1879, states that notwithstanding the inclement weather of last year, the health of the force attained the highest standard it has yet reached. In 1877 the daily percentage of sick was 2·875, in 1878 it increased to 3·3 per cent., and last year it fell to 2·9 per cent., which, taking into account the high death-rate of the city, and the severe and arduous duties of the men, may be considered the most satisfactory return ever presented. The deaths numbered ten, being one less than in 1878. The report speaks of the salutary influence of re-vaccination in resisting small-pox, not one of the thirteen patients who suffered from that disease during the past year having undergone the operation.

Berlin Hospitals in 1880.—There were received into the various Berlin hospitals, during the first quarter of 1880, 10,435 patients (under two years 444, between two and five years 327, between six and fifteen years 465, between sixteen and thirty years 5218, between thirty-one and sixty years 3570, sixty-one and above 411); of these 1331 died. There was no death from small-pox, 9 deaths from measles, 18 from scarlatina, 81 from diphtheria, 18 from croup, 6 from pertussis, 27 from typhoid fever, 16 from relapsing fever, 1 from typhus, 21 from puerperal fever, 88 from pneumonia, 347 from phthisis, 65 from other diseases of respiratory organs, 15 from acute intestinal catarrh, 38 from cerebral apoplexy, 27 from injuries, and 501 from unspecified diseases —*Veroff. d. K. Deutsche Gesundheits.*

TRINITY COLLEGE, DUBLIN.—The following resolutions were adopted by the Council at meetings held February 18 and May 12, 1880:—1. That the Medical Scholarships be separated into two, one being for Anatomy and Physiology, the other for Physics, Chemistry, Botany, and Materia Medica. 2. That no student be allowed to compete for the Medical Scholarship in Anatomy and Physiology after the completion of his third year, nor for the Medical Scholarships in Physics, Chemistry, Botany, and Materia Medica after the completion of his second year. 3. That no student shall hold both scholarships together. 4. That 60 per cent. of the marks for the scholarships in Physics, Chemistry, Botany, and Materia Medica be allotted to Physics and Chemistry, and 40 per cent. to Botany and Materia Medica. 5. That the course in Ophthalmic Surgery shall consist of three months' clinical instruction in Ophthalmic Surgery and a systematic course of lectures delivered twice a week. (It is added, as a proviso, that there shall not be less than ten full ophthalmic beds in use during the three months' course.)

TYPHUS IN ST. PETERSBURG.—The number of cases of the various forms of typhus, and the mortality of the disease, have continually increasedsince last autumn, so that the deaths rose from 67 in September, and rapidly increased to 554 in March. The total number during this period was 2025—viz., from typhus exanthematosus 587, typhus abdominalis 652, typhus recurrens 433, and typhus (the form not being specified) 353.—*St. Petersburg. Med. Woch.*, May 8.

"SALICYLIC" AND "SALICILIC."—Why write "salicylic"? We should like to know by what rule of orthography, analogy, reason, or common sense the word *salicilic* acid is spelt with a *y*? Is the genitive of "salix" *salycis*? Do we write "silycic" or "silicic" as the adjective of *silex*? With as much propriety we may say sulphuryc, muriatyc, or nitryc. And yet nearly all writers, pharmaceutical and medical, put it "*salicylic*," though such of them as know anything of language and terminology must know that it is wrong! It seems a small matter, but it ought to be rectified. —*Louisville Med. News*, April 24.

RETENTION OF SALIVA.—M. Terrier relates the case of a man, thirty-five years of age, who complained after breakfast of an increase in the size of one of his cheeks. On examination of the parotid region there was found a hard and slightly elastic tumefaction. When the orifice of Steno's duct was examined it was found to be closed by a small aphtha. A lachrymal probe was passed some distance into the duct without any difficulty, and on its withdrawal a large quantity of saliva issued out. There was no calculus in the duct.—*Gaz. Hebdom.*, May 14.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

M.D., Boston, U.S.A.—Try the Engadine, but not Central France.

A Metropolitan Teacher.—There are, of course, always more metropolitan than provincial candidates at the examinations for the Fellowship of the Royal College of Surgeons of England. Perhaps the following, which will give rather more than you request, will be interesting:—There were sixty-eight candidates, of which number forty-nine were metropolitan students, twelve from the provincial schools, and seven metropolitan and provincial combined. The list of successful candidates is published on another page.

F.R.C.S., Wolverhampton.—Mr. Luther Holden, the President of the College, will take the chair at the annual election of Fellows into the Council. The first Thursday in July is fixed for the great event. You will receive the usual notice in a few days.

Suffocated.—Mr. Collier, the Deputy East Middlesex Coroner, held several inquests last week on children who had been suffocated in bed. In one case the Coroner put several questions as to the sobriety of the mother, and in the course of his summing-up he remarked upon the large number of deaths amongst infants caused by their mothers either overlaying them or pressing the breast too close to the face. A large proportion of these cases occurred on a Saturday night, when parents went to bed, if not absolutely intoxicated, at all events having taken too much drink. Every year hundreds of children were thus killed.

Quintin.—It was Southey's remark that "Man is a dupeable animal Quacks in medicine, quacks in religion, and quacks in politics, know this and act upon that knowledge. There is scarcely anyone who may not, like a trout, be taken by tickling."

Overcrowding of the Poor.—In reply to a letter addressed to the new Home Secretary by the Howard Association, on the urgent need for further legislative endeavours to diminish the excessive overcrowding of the poor in various districts, the Home Secretary states that "the subject will occupy a large share of my care and attention."

Medical Authors.—Whilst disclaiming any undue claim as benefactors to mankind, it is certain that to the medical profession in all ages the public have been indebted for a profusion of good advice voluntarily given. What a catalogue of authors might be furnished of men who have written on the preservation of health, from Herodicus, the preceptor of Hippocrates, downwards. They have exhibited much of disinterestedness in the matter. The truth has not been concealed, but diffused, even against the painful practice of physic, and many a professional author may say, as Sir Thomas Ellyot does in reference to his "Castell of Health"—"I have not written for glory, reward, or promotion, God is my judge."

H. M. W., Sussex.—You are quite right. By law every person who is really destitute is entitled to relief upon application, and the responsibility of making arrangements for affording such relief rests with the guardians of the union or the officers of the parish in which the destitution occurs. The excuse to which you refer—namely, the workhouse being full on any particular occasion—will not relieve the authorities from that responsibility.

Female Shop Employés.—At an inquest held at Wapping a few days since on the body of a young woman, aged nineteen, who committed suicide by drowning herself in the Thames, it appeared the deceased, who was a very well-conducted girl, had been in one or two situations as assistant at drapers' shops, at the last of which her hours of work were from 8 a.m. to 9.30 p.m. She very often complained of excessive pains in the head, from which she had suffered ever since she took her first situation, and which she attributed to standing for so many hours in the shop. On the 13th inst. she quitted her employment, and committed suicide by leaping into the river, having previously written a letter asking her relatives to forgive the rash act. The verdict returned was "Suicide whilst of unsound mind." In some of our large provincial towns seats have been provided in shops for the shopwomen, and employers have admitted the beneficial and satisfactory results with which the indulgence has been attended. According to a circular issued by the Metropolitan Early Closing Association, there are still 30,000 shops in London and its suburbs, employing more than 10,000 assistants, who work for thirteen, fourteen, and fifteen hours a day, and even longer on Saturdays. This system of compulsory incessant standing of these *employés* is cruel and oppressive, and it may be asked why the same principle which has been applied to factory women and children should not be provided by the Legislature for shop *employés*.

Sirius.— "Ask *Medicus*' counsel ere med'cine ye take,
And honour that man for necessity's sake.
Though thousands hate physic because of the cost,
Yet thousands it helpeth that else should be lost."

A Comprehensive Resolution.—The Yeovil Board of Guardians, after some discussion, unanimously adopted the following resolution:—"That the education of the people, the sanitation of towns and villages, the maintenance of roads, the police and county rates, as well as the registration and vaccination fees, are national objects, and not for the convenience or advantage of any class of persons or property, and that consequently all incomes, however derived, ought to contribute their fair share to those objects."

Prohibiting the Supply of Intoxicating Liquors.—The High Commissioner for the Western Pacific, Sir Arthur Gordon, has issued a series of regulations under the provisions of the Western Pacific Order in Council of 1879, prohibiting the supply of intoxicating liquors to natives of Tonga and others resident in the Friendly Islands, the natives of Samoa and others resident in the Navigators' Islands, the natives of Rotumah and Savage Island and other residents therein. If any British subject sells, gives, or otherwise supplies to any native of any island comprised within the above-named islands or groups, any wine, spirits, or any other intoxicating liquor, he will, on conviction thereof before the Court of her Majesty's High Commissioner, be liable to a penalty not exceeding £10, or to be imprisoned for a period not exceeding one month.

Statistician.—Yes, Harriet Martineau, on the importance of registration, remarks—"A faithful register of births, marriages, and deaths is wished for by enlightened philanthropists of all advanced countries, far more as a test of national morals and the national welfare than as a matter of the highest social convenience. For this the physiologist waits as the means of determining the physical condition of the nation; as a guide to him in suggesting and prescribing the methods by which the national health may be improved and the average of life prolonged. . . . . When the philanthropist gains access to a register of the national births, marriages, and deaths he will have under his hand all the materials he requires as completely as if he were hovering over the kingdom, comprehending all its districts in one view, and glancing at will into all its habitations. The comparative ages of the dead will indicate to him not only the amount of health, but the comparative force of various species of disease; and from the character of its diseases and the amount of its health much of the moral state of a people may be safely pronounced upon."

COMMUNICATIONS have been received from—

Dr. Semple, London; Mr. Hulke, London; Mr. Parker, London; Dr. Croom, Edinburgh; Dr. E I. Sparks, London; Dr. Weber, London; Mr. John Chatto, London; Messrs. Kirby and Endean, London; Dr. Clement Godson, London; The Secretary to University College, London; Dr. Henry K. Oliver, Boston, U.S.A.; Dr. S. N. Philipps, Exeter; Dr. J. W. Moore, Dublin; Mr. J. K. Thornton, London; Messrs. Charles Griffin and Co., London; The Registrar-General, Edinburgh; Mr. G. H. Page, Dublin; The Secretary of the Royal Institution, London; Messrs. H. R. Williams and Co., London; Dr. R. Parker, Liverpool; The Hon. Secretaries of the Epidemiological Society, London; Rev. A. Gray Maitland, Woodford, Essex; Mr. T. M. Stone, London.

BOOKS, ETC., RECEIVED—

Transactions of the Odontological Society of Great Britain, vol. xii., No. 7—Antiseptic Surgery, by William Mac Cormac, M.A., F.R.C.S.—The Fifth Annual Report of the Committee for Darenth Schools and Asylum for Imbeciles, to December 31, 1879—Homœopathy: What is It? by A. B. Palmer, A.M., M.D.—The Spirit of Nature, by Henry Bellyse Baildon, B.A.—Fifteenth Annual Report of the Sanitary Commissioner for Madras, 1878—On the Coincidence of Optic Neuritis and Subacute Transverse Myelitis, by E. C. Seguin, M.D.—Small-Pox and Vaccination, by William Tiffin Iliff, M.D.—On Pyrexia or Pyrogen as a Therapeutic Agent, by John Drysdale, M.D.—Report on the Health, etc., of Kensington, by T. Orme Dudfield, M.D.—Eleventh Annual Report of the Leamington Provident Dispensary—Seventy-ninth Annual Report of the Wonford House Hospital for the Insane, near Exeter—Sea Sickness, by George M. Beard, A.M., M.D.—The Surgeon's Pocket-Book, by Surgeon-Major J. H. Porter—Testimonials in favour of James Christie, M.A., M.D.—A Case of Intra-ovarian Pregnancy, by Talbot Jones, M.D.—The Orthopragms of the Spine, by M. R. Heather Bigg—Fifty-ninth Report of the "Dreadnought" Seamen's Hospital Society, Greenwich.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Centralblatt für die Medicinischen Wissenschaften—Nature—Revue Médicale—Occasional Notes—Gazette Hebdomadaire—Louisville Medical News—Dublin Journal of Medical Science—Obstetrical Journal—Canada Lancet—Index Medicus—Morningside Mirror—Centralblatt für Gynäkologie—Students' Journal and Hospital Gazette—El Jurado Medico Farmaceutico—Indian Medical Gazette—Boy's Own Paper—Girl's Own Paper—Leisure Hour—Sunday at Home.

APPOINTMENTS FOR THE WEEK.

May 29. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

Royal Institution, 3 p.m. Prof. H. Morley, "The Dramatists before Shakespeare."

31. Monday.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

June 1. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Royal Institution, 3 p.m. Mr. Fiske, "American Political Ideas."

2. Wednesday.

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Lister), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.; National Orthopædic, Great Portland-street, 10 a.m.

Epidemiological Society (University College), 8 p.m. Annual General Meeting. Election of Officers; Report of the Council. Surgeon-General C. R. Francis, "On Endemic Plague in India.

Obstetrical Society, 8 p.m. Specimens will be shown by Dr. Chalmers, Dr. Galabin, and others. Papers: Dr. Charles Carter, "On Two Cases of Extra-uterine Fœtation, with Results." Dr. Graily Hewitt, "Report on Sixty-seven Cases of Uterine Distortion or Displacement, treated during Seven Years, at All Saints' Institution."

3. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

Royal Institution, 3 p.m. Mr. T. W. Rhys Davids, "Buddhist Sacred Books."

4. Friday.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

Royal Institution (Council Meeting, 8 p.m.), 9 p.m. Mr. H. H. Statham, "An Analysis of Ornament."

VITAL STATISTICS OF LONDON.

Week ending Saturday, May 22, 1880.

BIRTHS.

Births of Boys, 1195; Girls, 1101; Total, 2296.
Corrected average in the 10 years 1870-79, 2404·6.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	653	644	1297
Average of the ten years 1870-79, corrected to increased population	777·2	700·4	1477·6
Deaths of people aged 80 and upwards ...	...	...	47

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa
West	561359	2	7	4	1	12	...	3	1	2
North ...	751729	1	4	9	...	20	...	1	...	5
Central ...	334369	...	1	1	2	5	...	2	...	3
East	639111	3	2	9	1	18	...	2	...	2
South	967692	4	8	14	1	12	2	5	2	6
Total	3254260	10	22	37	5	67	2	13	3	18

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·973 in.
Mean temperature	53·9°
Highest point of thermometer	77·7°
Lowest point of thermometer	33·5°
Mean dew-point temperature	44·7°
General direction of wind	N.E., N.W., & W.S.W.
Whole amount of rain in the week	0·00 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, May 22, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1880.*	Persons to an Acre. (1880.)	Births Registered during the week ending May 22.	Deaths Registered during the week ending May 22.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Centimetres.
London	3664149	48·6	2296	1237	77·7	33·5	53·9	12·17	0·00	0·00
Brighton	107321	45·6	67	38	67·0	38·3	51·3	10·73	0·00	0·00
Portsmouth ...	134224	29·9	71	37	...	...	...	...	...	...
Norwich	85827	11·5	45	41	69·0	37·0	50·5	10·28	0·18	0·46
Plymouth	74993	53·8	47	34	76·3	42·2	57·1	13·95	0·00	0·00
Bristol	213536	48·0	126	76	73·0	36·2	52·2	11·22	0·00	0·00
Wolverhampton ...	75970	22·4	59	31	63·7	35·5	50·5	10·28	0·00	0·00
Birmingham ...	394738	47·0	275	152	...	...	...	...	...	...
Leicester	129912	40·6	95	45	...	...	...	...	...	...
Nottingham ...	173827	17·4	133	63	72·2	37·3	52·3	11·28	0·04	0·10
Liverpool	544056	104·4	360	312	...	...	...	...	...	...
Manchester ...	363130	84·6	178	185	...	...	...	...	...	...
Salford	185786	35·9	102	106	...	...	...	...	...	...
Oldham	115413	24·7	74	46	...	...	...	...	...	...
Bradford	197196	27·3	117	72	67·0	39·3	52·3	11·23	0·01	0·03
Leeds	318929	14·8	218	116	69·0	39·0	52·3	11·28	0·04	0·10
Sheffield	304938	15·5	202	129	67·0	40·0	50·8	10·45	0·02	0·05
Hull	149627	41·2	101	54	69·0	37·0	50·1	10·06	0·09	0·23
Sunderland ...	116730	42·2	77	53	...	...	...	...	...	...
Newcastle-on-Tyne	149366	27·8	117	62	...	...	...	...	...	...
Edinburgh	229839	54·8	134	96	71·6	37·7	53·9	12·17	0·20	0·51
Glasgow	589598	97·7	406	260	70·0	40·5	55·3	12·95	0·01	0·03
Dublin	314666	31·3	155	206	72·5	35·2	54·1	12·28	0·00	0·00
Total of 23 Towns in United Kingdom	8633571	39·2	5455	3511	77·7	33·5	52·7	11·50	0·05	0·13

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·97 in. The highest reading was 30·11 in. on Tuesday and Thursday evenings, and the lowest 29·62 in. on Saturday afternoon.

* The figures for the English and Scottish towns (except for Nottingham, Salford, and Oldham) are the numbers enumerated in April, 1871, raised to the middle of 1880 by the addition of nine years and a quarter's increase, calculated at the rate which prevailed between 1861 and 1871. Revised estimates have been adopted for Nottingham, Salford, and Oldham, based upon special returns of inhabited houses existing within those boroughs; the population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

ON SOME PUBLIC HEALTH POINTS IN THE MANAGEMENT OF A SMALL-POX HOSPITAL.

By ALEXANDER COLLIE, M.D.,
Medical Officer to the Homerton Fever Hospital.(a)

In recent years, the question of the relation of small-pox hospitals to the public health has been prominently before the public. Whether these are nuisances *per se*, or become so by reason of their management, has been discussed at great length, without, so far as I know, any suggestions having been made by means of which the nuisance, if such existed, might have been prevented. It is not my intention to consider the merits or the demerits of any particular hospital, nor to enter into a long argument on the question of the possible distance to which the small-pox poison may be carried through the air; but to lay before you a few facts gathered from my experience—facts, it seems to me, so simple, lying, so to speak, at our feet, that you may at first be inclined to think that they are too self-evident to require stating. In this, however, as in other subjects, it is the plain, simple things which nobody thinks worth attending to that have been forgotten, and which, had they been remembered in the management of our small-pox hospitals, would have prevented their acquiring that reputation for evil which in recent years they have unquestionably done.

But before proceeding to notice the points to be aimed at in the construction and management of a small-pox hospital in its relation to the public health, I shall make a few remarks on the nature of small-pox itself. And on this point I would say that, whatever may be the precise order in which the contagious diseases ought to be ranked in respect of their contagious power, small-pox is for us practically the most contagious, and, judged by *per centum* mortality, the most dangerous of them all. It appears to spread with greater facility than the other contagious diseases, and my own experience has led me to believe that the isolation and general precautions which are sufficient in the others are insufficient in this one. Unlike the others, it appears to attack at once all susceptible persons immediately on their exposure to it. There is no need in this disease, as in scarlet fever, typhus fever, and enteric fever, of a more or less lengthened exposure. When it strikes, it strikes at once. Unlike the others, it cannot be treated safely with these, as scarlet fever, typhus fever, and enteric fever may be, alongside of each other. In an ordinary pavilion hospital, fevers may be treated in pavilions situated side by side, with a laundry in common. The blankets, bedding, and linen of these different fevers may be used with impunity for either fever indifferently after being washed; but the same cannot be said of clothing which has been used for small-pox. And if you ask me why, I answer, Because small-pox, when treated in the same conditions as the other contagious diseases, spreads, whilst these do not. If, for instance, one case of small-pox arise in a hospital, or by mistake be admitted into one, more are sure to follow, and that not necessarily in the ward in which the first case appeared, or into which it had been admitted, but in the different and widely separated parts of a large building. Thus, if the first case appear in the extreme east, the second may appear in the extreme west, or possibly somewhere between these two points. Or if the first case appear at the top of the house, the second may appear at the bottom, and so on. Of course, in some cases the patient occupying the next bed to the first case will be the second, but the rule is, that, given a first case, sporadic cases will occur throughout the building. If these arose amongst convalescent patients, who might have been in contact with each other in airing-courts or otherwise, the explanation would be manifest, but it occurs when patients have not left their wards, or even their beds. Now, this experience of small-pox is not the experience of scarlatina, of typhus, or of enteric. Let any one of these be admitted into a general hospital and not be promptly isolated, it may happen that the person occupying the adjoining bed may contract the disease, but it will rarely spread so far, and very rarely beyond that. It will not, as in small-pox, be found in the room above, or in the room below. The precautions, then, which are sufficient for the other contagious diseases are not sufficient for this one.

If, however, it may share with measles the pre-eminence as a contagious affection, it excels that disease and all others of our English diseases in its direct fatality and in the serious nature of its sequelæ. The mortality in the unprotected is nearly 50 per cent., whilst even in the protected it very often attacks and not infrequently kills. The best vaccination is not always a protection even from death, and revaccination is not infallible as a protection from attack. The disease itself is more distressing to the patient, the convalescence is longer, and the consequences are more serious than in any of the other contagious diseases. Dropsy is a frequent sequela of scarlatina, but, unless it kill at the time, for the most part leaves no bad effects. Hearing is also sometimes affected, but rarely permanently so. The sequelæ of measles and whooping-cough, when they occur usually kill at once, and so form part of the mortality. The paralysis which follows diphtheria usually passes off; and as regards typhus and enteric, there are usually none at all. It is altogether different with small-pox. The sequelæ in this disease are serious and lasting. Disfigurement, loss of sight and hearing, and insanity, are the consequences of this loathsome affection; and the three former are permanent. The last has not been much noticed as a sequela, but out of 1000 cases which I treated during the epidemic of 1876-77, I met with one case of acute mania and two of moaning melancholia. With a disease of such severity as this the precautions against its spreading ought, I repeat, to be more complete than in the other contagious diseases.

With these preliminary observations I will now enumerate the points, attention to which will, in my opinion, reduce to a minimum the risks necessarily belonging to any small-pox hospital. The first and most important of these is, I think, the question of site, not in relation to soil, but in relation to patients; and I venture to lay it down as a proposition about which there can be little doubt, that a small-pox hospital ought to be situated where the patients are likely to be found. To erect a hospital of this sort where the disease is usually absent, and never present in epidemic force, may in some cases be justifiable on the plea of necessity, but, in the event of a hospital being required for such a neighbourhood, it should, as far as possible, be reserved for the sole use of the place. To bring a healthy and uninfected district into daily and hourly contact by means of the infected sick, by means of visitors who travel by road and rail, appears to me to be unjustifiable except on the plea of necessity. Notwithstanding, then, the great advantage of an open neighbourhood, I should establish my small-pox hospital where the disease was likely to be most frequent and severe—that is, in the densely crowded parts of large cities,—and generally I should prefer small hospitals to meet the needs of local outbreaks, to large hospitals at a distance from the homes of the sick. To what extent this may be practicable in particular instances, it is no part of my purpose to inquire. What I wish here to point out is the principle which, in all circumstances, should guide us; and that principle, as regards site, is the isolation of the disease on the spot, or as near thereto as may be practicable. The reasons for this are manifold. Generally, it is more or less dangerous to move patients long distances. The journey itself, even in the best of ambulances, fatigues, and, if the route be through the noisy streets of a town, there is not a little danger that the patient, if not yet delirious, may be made so, and if already so, may become worse, and so danger to life be increased, especially with so violent a delirium as that of small-pox. The patient will be more likely to consent to removal to a local hospital, where he will be near his friends, and these also will be more likely to consent than if he were to be sent to a place some miles away, where poverty would place serious obstacles in the way of the relatives communicating with the sick. And this objection to removal far from home is most powerful when it is of the utmost importance that it should be overcome, to wit, in the early period of an epidemic, when the cases are mild. In the latter case, friends

(a) Read before the Society of Medical Officers of Health, May 21.

urge that he is not bad enough to be sent away, especially so far, and so the mild cases are kept, the disease increases in severity, and only when a whole family lies prostrate does the removal take place, and then very often the bad cases alone are sent, whilst the mild ones are kept at home. Now, it is, I think, forgotten, or at least not sufficiently apprehended, that the real danger to the public health arises, not from the bad cases, but from the mild ones. People are generally willing, nay, often glad, to let the bad case go. They cannot manage it themselves and they submit to necessity. It is wholly different with the mild cases. In these it will be urged that the patient is not very bad; that the distance is great; that he will be under the care of strangers; that it will be difficult to visit him or to hear of him; that the bare cost of travelling to the hospital—say sixpence a day—is beyond their means; and that as he himself will come to no harm at home, they prefer to keep him. This one frequently hears at hospital. Friends will say there is another case at home, but it is not bad enough to be sent. To facilitate, then, prompt removal of mild and severe cases the hospital should, I think, be as near as possible to the door of the sick.

The actual danger to the patient, and the unwillingness of himself and his friends to removal to a place where they will have difficulty in hearing of him, are not, however, the only objections to a hospital far from the sick area. Each case of infectious disease improperly retained at home is, of course, a danger to the public health; but if the hospital to which contagious diseases have to be sent be at a distance, and in a locality free from the disease, there is risk not only of the introduction of the disease into the locality where the hospital itself is situated, but of its introduction into the districts lying between the hospital and the infected place from which patients have to be conveyed. That small-pox or any other contagious disease may be conveyed by third parties—that is to say, by persons not themselves the subjects of disease—to others, due regard being had to cleanliness and clothing, I do not think there is any evidence to show, and I think there is much of a negative character to render this improbable. But the visitors to a small-pox hospital are many of them not cleanly—in fact, are very much the opposite of cleanly,—have many of them no change of clothing. The dress of the small-pox visitor may be the dress on which she nurses her small-pox child, or with which she nursed the small-pox husband whom she visits or inquires after at the hospital; or mayhap it is the dress which has served the purpose of blankets for the small-pox sick. In other words, it is, in some cases at least, a dress contaminated by small-pox poison, and it is in this dress that she waits about at a railway-station or sits amongst others in a crowded railway-carriage or omnibus, where, on occasion, she possibly takes a neighbour's child on her knee. This I believe to be one of the ways in which small-pox may be carried by third parties; and the danger from this source is the greater the farther the visitors have to travel, the more crowded the thoroughfares through which they pass. That this is not merely imaginary the following extract from Dr. Budd, in respect of enteric fever, will help to show:—"In December, 1867, two young ladies living in country houses about two miles apart, having been invited to a ball, were measured for new dresses, on the same day, by the same dressmaker, who went for this purpose from one of these houses to the other, staying a considerable time at each. In the course of a fortnight both sickened for typhoid, and in both the attack proved to be very severe. They had not been away from home for several weeks before, and there was no fever in the immediate neighbourhood. But at the time when they were measured, the dressmaker herself had been nursing a child of her own for several weeks in a very bad attack of typhoid fever. For a fortnight or more this woman had passed a great part of every day with her sick child on her lap, and, as there was severe diarrhœa, it is more than probable that her clothes had become more or less soiled with the specific excreta." That there was any actually visible filth on this woman's apron is improbable, but there is, I think, a strong probability that she carried the disease; and if this be true of enteric fever, a disease less infectious than small-pox, how much more likely is it to be true of the latter, in which one of the specific morbid products is for long periods visibly existent outside the body, and in the very position to infect the clothing of those who may be in contact with it! But this is not the only way in which visitors may endanger the public health. They may be themselves the subject of the disease in a form too slight to interfere with their daily doings,—and such cases form a considerable proportion of current small-pox cases; and it is, I repeat, these mild cases which endanger the public health. A sad example of this came under my own observation on December 20, 1877. A. W., a domestic servant, aged sixteen, with three indifferent vaccination marks, was admitted into the Homerton Fever Hospital with well-marked enteric fever, from which she was convalescent on January 15, 1878. She lay next bed to a Mrs. B., who received visits from her husband, who during such visits would sit on a chair between the beds of B. and W. On January 18, 1878, the latter had the small-pox rash out, and on the 25th she died; when we learned that B., who had visited his wife on January 4, had been admitted into the Homerton Small-pox Hospital with small-pox on January 5. W. had not been out of the bed or the place in which she had been originally put, and there was no small-pox in the hospital at the time, and had not been for months. There is, I think, a strong probability that B. gave W. the disease of which she died; and you have only to think of this man sitting in a crowded conveyance, in a railway-train or an omnibus, to find an explanation of cases of infectious disease whose origin eludes discovery.

But what is probably a more frequent cause of the spread of small-pox is this. A considerable number of those who have been treated in their own homes will probably be about, contrary to medical advice—if they ever had any,—long before they are free of infection. In no acute infectious disease is it so difficult to persuade persons of the danger which they are to others during convalescence as in small-pox. A week or two will find a large number well and hearty, and it is only in a hospital with due legal authority that it is possible to keep such for one, two, or even three months, until they are quite free from scabs and scales, and presumably fit to mingle safely with their neighbours. But an anxious father or mother, thoughtless friends, etc., feeling quite well, are not very likely to think of the injury which their scabs and scales may do to the public. Such are some of the ways in which visitors may endanger the public health; and although, strictly speaking, it applies to visitors to any hospital, it applies with peculiar force to the hospital remote from the patient's home. No such objection lies against a hospital in the sick area. There the sick must be, and there inquiry can be made easily; and a hospital in such a district would in any case limit the existing evil and could cause little annoyance. Moreover, a hospital situated at a distance leads to an increase of correspondence by letter. The friends write more than they would otherwise if they could call and inquire, and letters written by small-pox hands, covered with more or less of small-pox infection, will pass through the post-office; and whilst I have no evidence to show that small-pox spreads in this way, it is a question worthy of consideration, having regard to the dangerous nature of the disease, the palpable nature of the contagium, and the persistent way in which it sticks to furniture, to the body, and to clothing, if this method of distributing letters should be allowed, for I do not think it possible for a letter to be written by a small-pox hand without some of the actual small-pox matter remaining attached to the letter. Parcels of various kinds will pass, by hand or otherwise, from the infected to the uninfected district—clothes for the patients, toys, etc., for the children; a dirty doll, for instance, wrapped up in an equally dirty wrapper. Now, if these various articles were clean, no harm might ensue; but this, in some cases at least, is impossible, for in many cases they leave a home where cleanliness is conspicuous by its absence. For these reasons, and another to be mentioned when we come to speak of ambulances, I would say that it ought to be regarded as a fundamental condition in the treatment of epidemic disease that the patients, as far as practicable, be isolated near their homes; that the hospital be as near as possible to the door of the sick man. And, in concluding this part of my subject, I would here suggest that the vacant spaces caused by the removal of houses by boards of works in uninhabitable conditions, be in the first instance offered to sanitary authorities for the construction of infectious hospitals. The houses so removed were "fever dens," and no objection—no reasonable one, at least—could be raised against the erection of an infectious disease hospital on such a site.

Having decided, then, that our hospital is to be situated

where the disease prevails, the next question to be considered is, how it should be constructed, so as to be in itself as little as possible of a danger to those who live in its vicinity. It is essential that it be surrounded by a high wall, at a sufficient distance from inhabited dwellings. This will admit of no dispute, and some may be inclined to think the bare statement superfluous. Obvious as it may appear, I am able to state from personal knowledge that the point is frequently neglected, and that to such an extent that free communication between small-pox inmates and the outside public has been possible daily, and of frequent occurrence actually. It will not, then, I trust, be thought superfluous to lay stress on the importance of so self-evident a precaution as an efficient wall. The distance from inhabited dwellings is open to some question. The evidence to enable us to decide this point is not so extensive as might be desired, but I have at least one fact bearing on the point. The Infirmary of the City of London Union at Homerton stands at a distance of ninety-nine feet from the westmost block of the Homerton Fever Hospital, and in this block upon two occasions, for a period of four months each, there were forty small-pox beds constantly occupied. The windows directly face each other and are almost always open. Here then, apparently, are the conditions for the passage of small-pox poison, if it be true that it may be carried long distances through the air. Amongst a number of persons, consisting of children, new-born infants, and young women in confinement, there were likely to have been some susceptible subjects. The poison was there, and not only in the block referred to, but in certain winds it would be blown from three similar blocks which are parallel to it. Thus air liable to contamination by about 250 small-pox patients might on two different occasions, for a period of about four months, have passed into rooms inhabited by persons, some of whom were probably susceptible to its influence, and yet on neither of these occasions did a single case of small-pox arise in the union infirmary; and although scarlet fever has been treated in the same block for nine years, with the small-pox exceptions referred to, no single case of scarlet fever has arisen in the lying-in wards of the infirmary or in the children's dormitories. It is on this account that I have come to the conclusion that 100 ft. would be a safe distance, and I do not think that in any case it should be much less. How I propose to utilise this "separation space," or distance between hospital wall and inhabited dwellings, will appear by-and-by.

That the hospital should be within the wall needs not be said, but it does need to be said that nothing but the hospital, the patients, and their attendants should be within it. The steward's office and residence ought to be without the wall, so that visitors on hospital business, the tradesmen, and their servants, need not enter any part of the hospital proper. To what extent a hospital may be a danger to districts near or remote from an infectious hospital may be imagined if one thinks under ordinary hospital arrangements how many persons enter some part of the hospital daily, and so have opportunities of contracting the disease. There are the milkman, the baker, the butcher, the greengrocer, and their assistants, who call daily. To those who attend daily have to be added those who attend less frequently, contractors of various kinds, provision merchants, vendors of patents and disinfectants, the friends of the dead, inquirers after situations, the wine merchant, the brewer, the grocer, the cheesemonger, the oilman, the soap merchant, the crockery merchant, the brushman, etc., etc.—all persons who, in my opinion, have no need to enter any part of a hospital proper, and who, unless efficiently vaccinated, cannot safely enter any part of a small-pox one. In order, then, that all unnecessary communication with the hospital proper be prevented, the steward's office and stores should be outside the hospital wall. Two cases of small-pox came under my own observation in persons belonging to a steward's department during an epidemic, one of whom died. There should be a separate entrance for patients, at which should be placed the porter's lodge. This should be situated outside the hospital wall, and at the end of a covered way, so as to allow ambulances to drive off the street at once, and so avoid the necessity for standing any time in the street, and the collecting of persons round the ambulance. The residence of the officers should also be outside the hospital wall, and reached by private entrances, after the fashion of a house in its own grounds. It appears to me unjustifiable that these, their families, and their friends, should be compelled, every time they enter and leave the hospital, to stand some little time amongst a group of small-pox friends, generally far from cleanly, and which may contain one or more persons like the man B., having the disease actually on them. One young gentleman, the near relative of an officer, came under my observation, who probably caught the disease in this way. These points will be more clearly understood by a glance at the sketch. From this it will be observed that the executive staff is grouped round the outside of the hospital wall, and that the "separation space" of 100 ft. is laid out in gardens outside—an arrangement which will entirely prevent any communication between the hospital and the outside. This arrangement has the advantage that it entails no more expense than other forms of construction, and, indeed, in point of fact, might be worked more economically than the ordinary arrangement, and, apart from the obvious advantage to the public health, would be a protection to hospital property.

Having thus, so far as I am concerned, disposed of the construction of the hospital, I now go on to consider the question of the admission of patients. For this there ought to be no formality and no sort or kind of difficulty. Under the regulations in force in the pauper hospitals there is much formality to be gone through. In the first instance application has to be made to a relieving officer; from the relieving officer the parish doctor has to be found, and finally the parish ambulance. It will be self-evident that by means of these formalities more or less delay must occur in moving the sick, at the very time when prompt removal is important, with more or less of increased danger to the public health. From a public health point of view, admission ought to be entirely free of any formalities whatever; and presuming that there would be a resident medical officer at the hospital, certificates might be entirely dispensed with. Let it be well understood that any person having the disease will be admitted on presentation. Our object as public health authorities is to induce people to go into hospital; that of the poor-law authority is to keep people out: and therefore admission to poor-law hospitals is attended with much formality, which may be necessary enough from a poor-law point of view, but which is fatal to the prompt isolation of infectious disease, and therefore to efficient sanitary administration. So much for the mode of admission.

Our next consideration will be the nature of the cases. The great majority will, of course, be small-pox, but there will be some other diseases for which provision must be made, because it is essential to the prompt suppression of an epidemic that doubtful cases be isolated: so that some cases will be or ought to be sent, it being at the time doubtful if they be small-pox, some other fever, or indeed anything—because some mistakes will be made necessarily,—and provision will be required for these. In the epidemic of 1876-77, out of 1000 admissions there were the following mistakes:—Measles 6 cases, *nil* 14, orchitis 1, syphilis 4, eczema 1, renal disease 1, gonorrhœa 1, erythema 3, acne 5, enteric fever 5, varicella 5, hip disease 1, typhus fever 1, pyæmia 1, herpes 1; and because any person supposed to be suffering from small-pox, and having in consequence been placed in a small-pox ambulance, sent to a small-pox hospital, and examined in a small-pox admission-room, seated during such examination in a small-pox chair, such person ought to be retained and isolated, even if he be suffering from some other contagious fever or from no infectious disease whatever. Much more is such a person to be retained in the small-pox hospital if he should have been actually admitted into a small-pox ward. And why? Because there is great risk that such persons may, in these circumstances, have caught small-pox, and that if sent away they may, at the end of five, nine, thirteen, or seventeen days, develope small-pox and spread the disease in the place to which they may be sent. This is no imaginary danger. On two occasions small-pox has been introduced into the Homerton Fever Hospital, because the medical officer of a small-pox hospital having, two days after admission, discovered that one of his patients was suffering from scarlet fever, sent her to the fever hospital, where, about nine or ten days afterwards, small-pox developed in the patient so sent, and spread to others. A similar outbreak was due to the action of the same officer, although, in the second instance, the patient had not been beyond the admission-room of the hospital. The mistakes, therefore, should

be admitted, and as soon as they are convalescent, and before they are out of bed, should be revaccinated, and retained fourteen or twenty-one days, after which time they may be moved. Cases of "*nil*" should be treated in the same way —admitted, isolated, revaccinated, and discharged at the end of fourteen days.

(*To be continued.*)

ORIGINAL COMMUNICATIONS.

THE VARIOUS METHODS OF DEALING WITH THE PEDICLE IN OVARIOTOMY.

By J. KNOWSLEY THORNTON, M.B., C.M.,
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(*Concluded from page* 554.)

If we intelligently and carefully consider the teaching of the early cases of complete intra-peritoneal ligature in which recovery took place, it is at once plain that the distal portion of the stump did not slough. It is quite inconceivable that a patient could get well if it did, except in the few cases in which it was discharged through the wound. This important lesson seems to have been almost entirely lost sight of for many years, however, and we find writers on the subject indulging in all sorts of absurd and unlikely theories as to the action of the ligature, and the changes it produces. I have said that in 1861 Dr. Tyler Smith revived the practice of complete intra-peritoneal ligature, and with sufficient success to make it remarkable that any doubt could remain as to the changes taking place in the stump when so treated. Yet, seven years later, in 1868, Spiegelberg and Waldeyer published in *Virchow's Archives* a series of experiments on animals from which it is evident that they considered the matter still *sub judice*. For a short account of these experiments, together with valuable observations on the complete intra-peritoneal ligature, I would refer to Mr. Wells' well-known work on Diseases of the Ovaries. Other very interesting experiments by Masslowsky, of St. Petersburg, will also be found in the same part of Mr. Wells' work. Peaslee, who shows an admirable power for collecting and comparing the observations and experience of others, and whose work must ever retain a very high place as giving a complete history of ovariotomy down to his own time, makes the following astounding statement in speaking of the use of the short and long ligature :—

"It admits of a complete closure of the incision if the ends are cut close, and very nearly so if they are brought through the incision. *But this is rather a matter of taste and convenience than of much practical importance.*" (The italics are mine.) This, though he afterwards goes on to prove from his own practice that the pedicle does not slough when treated by the short ligature. I will now quote from my own paper, already referred to :—"In one of my cases I tied a large piece of omentum adhering to the cyst in two places, and divided it between the ligatures, thus leaving a stump on the outside of the tumour very like that of the ovarian pedicle. I afterwards injected the cyst with Beale's Prussian blue fluid, and, when the injection was complete, noticed that the distal end of this stump was blue, though not so blue as the proximal part, and there was no appreciable escape of the fluid from its cut surface. Microscopic examination showed that the injection had passed into the minute capillaries, but not into the larger vessels, except where it had passed into them by the anastomoses beyond the ligature. If the injection would so pass, the blood would also pass; and in this way the vitality of the part would be at any rate partially sustained until the other processes by which the distal end of the stump is nourished had time to be completed."

I afterwards enumerated certain of the processes by which the stump is nourished, as observed by myself, as follows :— The ligature buries itself in the peritoneal coat of the pedicle, and vascular connexions are rapidly established between the parts adhering over it. Lymph is thrown out over the end of the stump and over the ligatures; in this new vessels form. The stump adheres to some neighbouring surface, and from that derives its main blood-supply. In either case the passage of blood through the capillaries under the ligature is an important aid. By whichever method the nourishment of the stump is carried on, the strands of the ligature are separated by ingrowth of new cells, and it is soon absorbed and disappears. Sometimes the knot (or the whole ligature, if very thick silk is used) becomes encapsuled, but complete disappearance is the rule. It will be obvious that the least favourable method is that in which the cut surface of the stump adheres to some neighbouring part; because if it be to intestine it may cause a kink and direct obstruction, and if it be to some other part it may form a bridge, under which a coil of intestine may become adherent or strangulated, and thence may follow indirect obstruction.

It may be as well here to allude to another objection which has been raised to the complete intra-peritoneal ligature, and that is the risk of hæmatocele, similar in origin to that occurring externally after the use of the clamp. That this is extremely unlikely is theoretically apparent when we study the above processes of repair and obliteration of the stump. And as a practical proof of the truth of the theory, I may mention that I have only had one case of hæmatocele occurring after ovariotomy in over 170 cases treated by the complete intra-peritoneal method, and that was in a case of twisted pedicle—the vessels and tube being obliterated by the twisting, and consequent inflammatory changes, before I ligatured it,—and the hæmatocele came on so distinctly after chill at the period-time that I think it is quite likely it was altogether independent of the pedicle and of the operation.

I have little to add to the advice I gave in the paper from which I have quoted as to the kind of ligature and the method of applying it.

No. 3 or 4 Chinese silk, applied by one or more transfixions, according to the breadth of the pedicle, each loop interlocking with its neighbour so that a perfect chain is formed. In my previous paper I advocated the use of a special fine ligature, applied so as to include the veins of the pampiniform plexus in the outer part of the pedicle, "whenever the outer edge of the broad ligament feels tight as one passes the fingers along it." I now always use this special ligature, and I may take the opportunity of saying that I was the first to use it in the Samaritan Hospital, and also the first to advocate and use the complete interlacing of ligatures in pedicles in which a single transfixion does not afford sufficient safeguard against hæmorrhage.(b) I have recently made a very interesting and important observation with regard to the method of using this outer-edge ligature. For it to be of service it is essential that it should embrace the whole of the mass of veins already referred to—a fact entirely lost sight of by some of those who have copied the method without understanding my reason for adopting it, and use it as if its sole aim were to make a little grove in the outer edge of the pedicle as a guide to tying the other ligatures.

When it is properly applied, almost all the venous channels for the return of blood from the cyst are closed, and the main arteries not being interfered with, the cyst rapidly becomes injected and congested. We have thus a beautiful method for bleeding the patient into her own tumour, if it seem desirable that she should lose a little blood, and I have twice lately been able to demonstrate this fact to those present at my operations. It will at once be seen that when operating on a feeble patient, or on one who has lost much blood from adhesions, it becomes of vital consequence to apply this ligature *after* the arterial trunks have been secured by the ordinary transfixing ligatures. No. 1 Chinese silk, which I also use for the sutures, I use for this special ligature.

With the view of avoiding the occasional complications arising from adhesion of the cut surface of the pedicle to neighbouring organs, I adopted the plan of sewing over the posterior edge of the cut surface to the peritoneal surface of the anterior uterine *cul-de-sac*, and I still occasionally do this. It cannot in all cases be neatly done, and it adds somewhat to the length of the operation, but I am sure it is very efficient in gaining the end I proposed to myself in adopting it; and I have recently had an opportunity of

(a) A paper read before the Harveian Society, March 18, 1880.

(b) In the discussion which followed the reading of this paper, Mr Bryant called my attention to a paper of his in the *Guy's Hospital Reports* vol. xiv., 1868, which clearly proves his claim to priority as having been the first advocate of this very important detail. He actually figures the locked ligatures, and also gives some valuable experience in ligature of the ovarian pedicle which I had overlooked.

examining a pedicle I had thus treated ten months before, the patient having in the interval developed a tumour of the other ovary, which I have recently successfully removed. The place where I had sewn up the pedicle was indicated by a very minute projection (half the size of a horse-bean), and there were no adhesions to any other surface. I now guide my practice in this respect much by the position which the pedicle seems inclined to occupy when I push it back into the peritoneum. In the majority of cases, if the ligatures have been carefully applied, it will naturally curl over the edge of the broad ligament, and lie conveniently out of the way in the anterior *cul-de-sac* without being sewn there. I still hold to my opinion that it is not advisable to tie the pedicle too tight; and I am convinced that this too-tight tying is the cause of unnecessary pain and occasional high temperature, and I incline to the belief that it explains occasional cases of tetanus. It also tends to complete strangulation of the distal portion. If I am not quite satisfied as to my first ligatures being secure, I tie another round the whole, using the ends of one of those already tied or a separate ligature. This by bunching up the pedicle exerts sufficient pressure to stop any slight oozing; and this with a minimum of force in tying this final ligature. I use one of the suture-needles or a finer curved one for the outer-edge ligature, and the ordinary handled perineum, or fistula-needles, of various curves for the transfixion; and I infinitely prefer a fine, sharp needle to any of the blunt ones in use. It is easy in most pedicles to avoid puncture of a vessel with a fine-pointed needle, and if one is punctured the opening is small and the bleeding stops when the locked ligatures are tied; whereas with a broad, blunt-pointed needle splitting of the broad ligament is a frequent occurrence, and vessels are quite as often opened as with the pointed needle, and with a much larger hole.

My colleague Mr. Doran has contributed two valuable papers on "Complete Intra-peritoneal Ligature" to vols. xiii. and xiv. of the *St. Bartholomew's Hospital Reports;* and I would advise those who are interested in the subject to study them carefully. I would direct especial attention to his remarks on the post-mortem of one of my own fatal cases in the second paper, and to the following among his final conclusions:—"It follows that it is much more dangerous to draw the ligatures a little too firmly than to leave them somewhat looser than is strictly advisable."

Mr. Doran's post-mortem observations thus confirm my own theory, founded on the experimental injection of the large omental adhesion. An observation of the utmost importance is also made by Mr. Doran, to the effect that where the cut surface does not become covered by clot the edges often curl inwards and unite; thus giving us a natural illustration of the result aimed at by Masslowsky, and of course free from the objection I raised to his method.

So far I have not referred to any special method of performing the operation apart from the mere method of dealing with the pedicle, and before doing so I will give the results of my practice before I adopted Listerism, and, I may add, before I adopted what I now consider a thoroughly satisfactory method of using the ligature. Nevertheless, I claim for my results, even with these shortcomings, a fair place in the statistics of ovariotomy.

Before commencing Listerism I had performed 38 complete ovariotomies. In 6 of these I had used the clamp alone—3 of the patients died. In 2 of the fatal cases many ligatures were used on adhesions, and also in 1 of those which recovered. In the other 3, including 1 fatal case and 2 recoveries, no ligatures were used. In 1 case I clamped one pedicle and ligatured the other; the patient recovered. In 1 case I performed a pure enucleation, merely using three fine ligatures for adhesions; the patient died. In these 8 cases I do not think the method of securing the pedicle affected the result; but I am a little doubtful as to the share played by the clamp in one of them. This leaves 30 cases, of which 5, or 16·66 per cent., died—a result above the average of the leading ovariotomists before Listerism became general.

Looking a little more into detail we find:—7 cases of removal of one ovary, pedicle secured by one transfixion; 2 deaths—1 from hæmorrhage due to slipping of ligature, 1 distinctly not due to ligature. 8 cases of removal of both ovaries, each pedicle secured by one transfixion; 1 death, part played by ligature open to question. 3 cases of removal of one ovary, one transfixion and third ligature round the whole pedicle; all recovered. 5 cases of removal of one ovary, pedicle transfixed and laced with several ligatures; all recovered. 2 cases of removal of both ovaries, each pedicle laced; both recovered. 3 cases of enucleation, assisted by several ligatures; 2 recovered, 1 died—the symptoms make it probable that the enucleation was the fatal element, rather than the ligature. 1 case of removal of both ovaries, one pedicle partly sewn into the wound (Stilling's method); patient recovered and lived several years, but had recurrence in wound and died of tetanus after a second operation in the cancer wards at the Middlesex Hospital. 1 case in which I made an imperfect attempt at Listerism, and used strong silk soaked in carbolic oil for both pedicles, also died.

Compare these results with those tabulated by Dr. Heywood Smith in his recent paper on "The Treatment of the Pedicle in Ovariotomy."(c) Take the favourite method of some of the operators. Baker Brown, with the cautery, 40 cases, death-rate 12·5 per cent.—4 per cent. lower than mine, but representing a personal experience three times as great as mine. Keith, in 47 clamp cases of 50 published in 1867 (*Lancet*), had a death-rate of 19·2 per cent. (It is fair to suppose, from the frequent use of the clamp in this series, that it was then Keith's favourite method.) Spencer Wells, with 627 clamp cases (certainly his favourite method up to that time), had a death-rate of 20·73 per cent.

Since I am thus making use of my friend Dr. Heywood Smith's paper, I must refer to a few points in it which seem to me to require comment. Thus I find the following statement:—"The only scientific way, or, indeed, the only fair way, of reporting cases so as to arrive at a conclusion that will be of any use, is first of all to exclude from our calculation every case whose prognosis is unfavourable—viz., cases where the tumour is suspected or found to be malignant, and cases where the operation is undertaken as a last chance for the patient's life; when, for instance, there already exists peritonitis, or a suppurating or ruptured cyst, or where the patient's health is otherwise in the condition that would make any operation more than usually hazardous."

Now, I entirely differ from this opinion of Dr. Smith's, and I maintain that such a method of preparing statistics would not only be most unfair, but most unscientific. We do not want to know what method will give the best results in favourable cases, in which most methods succeed, but in all cases. Adopting Dr. Smith's plan, I would undertake with the aid of Listerism to show 100 per cent. of recoveries. To exclude the class of cases he enumerates would make statistics worse than useless, for it would make them misleading.

While on this subject of statistics, which has agitated the profession considerably during the last few months, I would take the opportunity of saying that I believe if a surgeon publishes statistics at all he is bound to make them complete in the strictest sense of the word, and I hold that any case dying within a month of a great surgical operation, whatever the apparent cause of death, cannot be omitted from the mortality of that operation.

I quite agree with Dr. Smith as to the importance of classifying methods and modifications of methods, so long as it is not carried too far; but I do not think that adhesions, except in a very few cases, affect the mortality, and I think the character of the pedicle equally rarely affects it. It might be supposed that taking away both ovaries would be more hazardous than only removing one, but experience is rather against this theory, always provided that both are diseased.

If anything like the value attached by some writers to experience is really its due, then I think the ligature is indicated clearly on account of its universal applicability.

I will now pass to the use of the complete intra-peritoneal ligature according to the method I have advised, and with the important addition of Lister's method in its every detail. The same Chinese silk is used, but it is soaked in one-to-twenty watery solution of Calvert's No. 1 carbolic acid, or a similar solution of absolute phenol.

I have now performed ovariotomy 130 times with full Listerian precautions. Of these 130 patients 14 have died, a mortality of 10·76 per cent. I am not specially concerned to-night with the antiseptic side of the question, but I must give some explanation of these figures: 7 of the 130 cases suffered unmistakably from septicæmia, the result of previous tapping without antiseptic precautions, and of consequent

(c) *Obstetrical Journal*, November, 1879.

putridity of the cyst contents; 5 of the 7 cases died, and 2 recovered. The actual antiseptic cases were therefore 123, with 9 deaths, or a mortality of only 7·30 per cent.

Of the 9 deaths in this series 2 were from acute pleurisy, and I attribute both to the chilling from the spray; 1 with a ruptured colloid cyst, operated upon during a very acute peritonitis, died in twelve hours with complete suppression of urine—such cases were occasionally met with under similar circumstances before we used carbolic acid at all, but it is quite possible, from what we see of the effect of carbolic acid on the kidneys after prolonged operation, that the fatal result was in this case accelerated by the absorption of carbolic acid; 1 died from cardiac and renal disease, doubtless much accelerated by the operation; (d) 2 after very formidable operations died very quickly from shock—possibly the method hastened the fatal result, but I think death was inevitable in either case; 1 died of some obscure brain affections—it is an open question whether my antiseptic precautions were imperfect, or whether thrombus and embolism resulted from some veins left open, as it was a case in which there was much enucleation; 1 died of obstructed intestine on the twelfth day after operation—the patient was a very bad subject for any operation, being hemiplegic and in a very depressed mental condition. This is the only one of the deaths which can be attributed to the ligature. The obstruction arose from adhesion of the ileum to the left pedicle, and to an adhesion which had been ligatured deep down in the pelvis. The remaining case, the last I lost, died of malignant disease of omentum and peritoneum. Her temperature had been much below normal for many days before the operation, but I thought it right to give her the chance of prolonged life afforded by removal of the ovarian tumour, which was also malignant.

Of the 130 cases 16 were operated upon outside the hospital, and they all recovered, though 1 of them suffered from septicæmia, the result of previous tapping.

Before classifying these cases according to the exact method of applying the ligature, I may briefly re-state the method I advocate:—1. The operation to be performed in all its details strictly on Lister's method. 2. No. 3 or 4 Chinese silk soaked in one-to-twenty watery solution of carbolic acid to be used for the chief transfixing ligatures, and No. 1 Chinese silk soaked in the same solution for the special ligature for the veins in the outer part of the pedicle. 3. The chief ligatures to be applied by one or more transfixions with an ordinary sharp-pointed curved and long-handled needle, all the ligatures to interlock so as to form a complete chain. 4. The special ligature for the outer part of the pedicle to be applied by transfixion, with a fine straight or curved needle, after the other ligatures if we wish the patient to lose as little blood as possible, and before them if we wish to remove a little extra blood in the tumour. 5. The ligatures not to be tied too tightly, another loop being carried round the whole pedicle if any oozing from the cut surface is observed before closing the incision.

The 130 cases may be arranged in the following classes:—Both ovaries removed in 32 cases, of which 5 died. Right ovary removed in 35 cases, of which 2 died. Left ovary removed in 60 cases, of which 7 died. One ovary removed (not sure which) in 3 cases, of which none died.

In all the fatal cases there were extensive adhesions; in 4 the tumours were very large, weighing respectively 48 lbs., 50 lbs., 75 lbs., and 82 lbs. In 6 there was much tearing and enucleation, so that the ligatures were not applied by any rule, as there was no distinct pedicle to deal with. In 2 in which the ligatures were actually applied according to the method advocated, the patients died too quickly for the ligatures to have affected the result—the two cases of pleurisy.

In the successful cases, 9 required much enucleation before the tumours could be sufficiently freed in the pelvis to form anything like a pedicle. Some of the patients were very ill for some days. Hence from the large mortality (6 out of 15) and the comparative ill-doing of many of those who recovered it is evident that this extensive broad ligament encapsulation requiring much enucleation is a much more unfavourable condition than any shortness or thickness of the pedicle. It is also evidently much more to be dreaded than extensive adhesions, for there were 54 cases in which the adhesions were very extensive, requiring many ligatures.

There were 17 cases of burst cyst, but only 2 of the patients died, and in both there was hopeless malignant disease of all the peritoneal surfaces. There were 43 cases without any adhesions, 5 of the cases of burst cyst being among these. The remaining 33 cases had slight parietal or omental adhesions, or both.

I might enter more into detail as to the exact number of ligatures used in each case, etc., but my paper is already too long, and I doubt if such particulars really help the solution of the question. I trust I may be considered to have proved the satisfactory nature of the results to be obtained by the constant use of the complete intra-peritoneal method of ligature; and if in so doing I have aided in spreading its general use, I feel confident the future statistics of ovariotomy will improve in proportion. When commencing this paper I wrote to all the leading American ovariotomists, and have received the most courteous replies from Drs. John Atlee, Addis Emmet, Kimball, Noeggerath, and Gaillard Thomas. Dr. Atlee still prefers the clamp in simple cases, but uses the complete intra-peritoneal method of ligature also. Dr. Emmet prefers the latter method Dr. Kimball, after trying most of the methods I have described, now also considers the complete intra-peritoneal ligature most satisfactory. Dr. Noeggerath holds the same opinion; and Dr. Thomas does not express any decided preference, but has obtained equally good results with both the extra- and intra-peritoneal methods. There is so much valuable material in the five letters that it would be necessary to write a long paper on them alone, but at present I am compelled to give merely the general conclusions, which, as a whole, will be seen to be decidedly in favour of the plan I advocate.

(d *Obstetrical Journal*, August, 1878.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

LONDON HOSPITAL.

TWO CASES OF GLYCOSURIA—REMARKS.

(Under the care of Dr. STEPHEN MACKENZIE.)

Case 1.—Maria C., a Jewess, aged sixty-three, admitted on August 21, 1878, complaining of languor, thirst, great hunger, insomnia, and irritation of the vulva. She states that twenty-seven years ago she was in the hospital for "dropsy," and that with this exception she has enjoyed good health. Has not drunk much, but has lived well, and been very fond of rich dishes, sweets, etc. For twelve years she has been troubled with itching of the vulva. Six years ago noticed that she was always thirsty and hungry. For years has been unable to sleep at night. For the last four months has become languid and had pain in the back.

The patient is an old-looking woman, with iron grey hair, brown eyes, with marked annulus senilis. She is very stout, and her cheeks are injected. There are no abnormal signs in heart or lungs. The liver and splenic dulness are masked by fat. Tongue furred in middle, red at edges; bowels confined.

She passed on admission 2500 cubic centimetres of water with a specific gravity of 1040, containing 250 grammes of sugar and 40 grammes of urea.

The patient was put on a non-saccharine and non-amylaceous diet (gluten bread, meat, green vegetables, milk), and at once made great improvement. The quantity of urine and sugar fell considerably; but the urea, whilst fluctuating, maintained an average daily excretion of thirty to forty grammes. No medicine was regularly administered; an occasional dose of codeia was given to relieve the habitual insomnia, and some small doses of opium to check an attack of diarrhœa.

The patient was made an out-patient on November 13. She was then passing 1033 cubic centimetres of urine with specific gravity 1020, only a faint trace of sugar. She felt better than she had for years.

Case 2.—A. P., aged fifty-seven, a wheelwright, admitted September 14, 1878, came complaining of pain and swelling of the legs. He states that neither he nor any of his family have suffered from gout. He has been a hearty eater all

his life, having meat once a day, but taking chiefly bread and butter. He is fond of fat. At one time he drank "too much," but of late has restricted himself to three or four pints of beer a day. He has noticed that he has been thirsty for two or three months. He has not noticed that he has passed an increased quantity of urine, but has observed that he has passed it more frequently, having to rise two or three times in the night for the purpose. He very rarely suffers from headache. Some years ago he had carbuncles on his neck.

He first began to feel ill twelve months ago, when he had pain in his legs, especially about the shins and ankles, and became so somnolent that he fell asleep over his meals. These symptoms continued, sometimes better, sometimes worse, until two months ago, when his legs began to swell, and they have continued to increase in size and be more painful since.

The patient is a very stout man, of florid complexion. His teeth are somewhat decayed. His tongue is furred; the bowels open. Beyond slight chronic bronchitis, the viscera present no signs of disease. His legs, especially the right, are swollen, red, and pit slightly on pressure.

On examining his urine, it was found to have a specific gravity of 1037, and to contain 7·7 per cent. sugar, and 1 per cent. urea. It contained also a trace of albumen.

The patient was put on a restricted diet, and there followed rapid improvement in his general health and in the condition of his urine. The erythema of the legs (evidently gouty) subsided with rest in the recumbent position and the application of lead lotion. The sugar in the urine steadily declined, and with it, of course, the specific gravity of the urine. When he was made an out-patient, on November 12, the average specific gravity of the urine was 1012, and there was just a trace of sugar and albumen. The legs were almost well.

These two patients attend occasionally in the out-patient department. Their general health keeps good. Sometimes their urine contains a trace of sugar, sometimes none. They take mixed diet, but avoid saccharine, and limit their consumption of amylaceous food.

Remarks.—These cases are representatives of a class we see a good deal of—more so, perhaps, in private than in hospital practice,—persons, past middle life, stout in habit, often of gouty constitution and heritage, and who habitually take larger supplies of food, especially saccharine and amylaceous, than can be transformed and utilised by the liver. The glycosuria may be intermittent at the commencement, but if the case be neglected it becomes constant and a serious drain to the constitution. In treating such cases it is often sufficient to rest the overburdened liver from its work by removing from the diet such matters as are transmitted by it unchanged. After such rest the liver resumes its functions, and amylaceous food may be cautiously and tentatively used. The amount of farinaceous food should, however, be always limited, and sugar in any form wholly interdicted. Where there is evidence of renal inadequacy, as indicated by low specific gravity and traces of albumen in the urine, it is as important to curtail the amount of nitrogenous food as to limit the carbo-hydrates. This is a fact often lost sight of, and the blood and kidneys are relieved of sugar, which the latter can get rid of, and flooded with urea, which they cannot eliminate. Medicine is not essential in the treatment of such cases, and the two cases narrated have been given to illustrate this, but it is often very serviceable. Carlsbad salts and alkalies are especially of use. This condition may exist an indefinite time, and may be of little prognostic importance.

The St. Petersburg Hospitals.—The neediness of these establishments has been long known, and becomes more visible every day; and although their wants have been made known, no assistance is proffered, the appeals having proved of no utility in bettering the state of things. Their poverty may be best shown by comparing the sums allotted per head and per day at these establishments with those of some foreign ones. St. Petersburg hospitals, 17·9 copecks; the Vienna General Hospital, 36; the Prague General Hospital, 60; the Berlin Charité, 42; the Breslau General Hospital, 31; the Hamburg General Hospital, 48; and the Copenhagen General Hospital, 46 copecks.—*St. Petersburg. Med. Woch.*, May 8.

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Medical Times and Gazette.

SATURDAY, JUNE 5, 1880.

THE LONDON WATER-SUPPLY.

Further steps in the direction of settling the question of the London water-supply were last week taken by more than one public body. A deputation from the Metropolitan Board of Works had an interview with the Home Secretary and the President of the Local Government Board, when Sir James Hogg explained the views of the Board on the subject. The Board felt, he stated, that it could not stand by in this discussion, but it was hampered by its limited powers. What happened last year precluded the Board from again promoting a Bill of its own, and it had resolved to submit to the Government that it was willing to undertake the management of the London water-supply. By giving the Board the control, the ratepayers would have the practical management of a concern in which they were deeply interested; and the first object of the Board would not be to make profit, but to give a pure and good supply. The Board therefore asked for an enlargement of its powers by extending the scope of the 144th Section of the Metropolis Local Management Act, 1855, and further supported the appointment of a Select Committee to consider the agreements already entered into with the water companies, undertaking, if such Committee was appointed, to furnish it with all the information possible. Sir W. Harcourt admitted that the question was very complicated; there was no Bill now before Parliament, and certainly no intention to revive the late Bill. If the water companies would not deal with the ratepayers of London on reasonable terms, the ratepayers and Parliament were not incapable of finding some other resource. The public must consider whether it was worth paying the companies the price asked for the article supplied, or whether for the same, or less, cost they could not be supplied with a better article. The present water companies had no monopoly of a water-supply; there might be difficulties and inconveniences in getting a new supply, but these could be overcome.

The present Government had not adopted the agreements entered into by their predecessors; they found them existing, and were willing they should be inquired into. It was not desirable that any commission appointed should be embarked in an inquiry of a protracted character, and the Government would see that the Board of Works had every opportunity afforded it for assisting at any investigation undertaken. At the last week's meeting of the City Commission of Sewers, a report on the question of water-supply was brought up from the Finance and Improvement Committee, in which they recommended that the matter should be inquired into by a Select Committee of the House of Commons, and that the Corporation should be prepared to take part in the inquiry, and co-operate therein. After a lengthened discussion, this report was carried, with a rider calling the attention of the Home Secretary to the need of reconsidering and revising the basis of the water-rate. As a result of these movements on this important question, the Home Secretary stated in the House of Commons, on Monday night, when replying to a question from Mr. Brand, that the Government intend to ask for a Select Committee on the London water-supply prior to introducing a Bill on the subject. It is not possible to learn from Sir William Harcourt's speeches what the Select Committee is, and what it is not, to inquire into; and indeed it is evident that Sir William is himself desperately puzzled what to do. He knows nothing whatever of the subject,—the only excuse for his previous wholesale denunciations of all that his predecessor had done in the matter,—and therefore gladly accepts the suggestion of a Select Committee as a most wise and reasonable request; but he does not see how to frame the terms of the order of reference to the Committee. An inquiry into the agreements could be brought, he thinks, into a moderate compass, so as to be disposed of in the present session; and it was very advisable to do something soon, and not to hang up the question indefinitely. But, at the same time, it would not be possible or desirable "to exclude from the mind of a Committee appointed to consider the proposed terms of purchase, the consideration of the question whether the purchase of the undertakings of the existing water companies was in itself the only or the best possible alternative, and whether it might not be more desirable to obtain from other sources a better supply at a cheaper rate." The possibility of such an inquiry as that being undertaken must sharply accentuate the water-rate payers' desire to learn the Home Secretary's answer to the resolution sent him by the "Joint Gas and Water and Local Government and Taxation Committees" (City of London), viz., that in any event, until the question of the metropolitan water-supply is settled, the power of the companies to raise their charges without increasing their supply should be suspended. But here again the utterances of Sir William Harcourt are neither clear nor assuring. He is of opinion that the basis of the charge for water seems a matter deserving of inquiry and redress; and one of the principal subjects before the Committee will be the power of raising rates of the companies, and their manner of exercising their powers. In replying, indeed, on Tuesday, to a deputation from various vestries and district boards of the metropolis, Sir William said that the companies have power only to charge on the actual value of houses, and have nothing to do with any alterations in the assessment; but this is cold comfort. Who will bell the cat? What individual, or individuals, will be public-spirited enough to fight the long purse of a water company on the legality of an increased water-rate? Sir William's perplexities are rapidly educating him. He is beginning to exhibit a touching tenderness towards vested interests. He warned the deputation that Parliament is extremely cautious in invading rights conferred by Acts of Parliament, unless in cases of extreme necessity. They must see if the objects of the deputation could not be accomplished without alarming people as to the security of property. He did not know anything more unsafe in this country than to make people suppose the securities given to persons in their properties by Act of Parliament were not safe, and were liable to be invaded. Could any practised official from either side of the House have spoken more nicely, and expressed less?

SALICYLIC ACID IN ACUTE RHEUMATISM.

As we indicated last week, there is in the present number of the *Nordiskt Medicinskt Arkiv* an article on the treatment of acute rheumatism by salicylic acid. It is from the pen of Dr. Von Bokkenheuser, but the observations on which it is founded were made in the wards of Dr. Trier, in the General Hospital at Copenhagen. The paper consists of three portions—one relating to the chemical history of salicylic acid; another to its physiological effects; and the third, which mostly concerns us, deals with its therapeutic effects in acute rheumatism. As regards its chemistry, we need only point out what is elsewhere mentioned in a letter from Mr. Holmes, that salicylic acid is derived from two sources—one the oil of wintergreen, and the other carbolic acid,—and that the former, though far the more expensive, is the only form of the remedy to be relied upon as perfectly pure. Next, we ought to mention that, with perchloride of iron, salicylic acid and the salicylates strike a deep indigo blue, and that this reaction is looked upon, when discovered in the urine, as a sure sign that the body has been thoroughly saturated with the substance. Sometimes the reaction may be got in a few minutes, sometimes not for hours, or even days.

As regards its physiological effects, two things are noteworthy. It is a very powerful antiseptic, and perhaps an equally powerful antipyretic. The way in which it acts as regards temperature is not quite clear; but its reducing or paralysing effect on the heart is fully admitted by its strongest supporters; whilst the albuminuria, which was looked upon here as a phenomenon independent of the action of the drug, is now abroad acknowledged to be a frequent consequence of its administration. Thus, albuminuria was noted in one-fifth of the eighty-one cases recorded in the paper before us. Some may think this of much consequence, others of little; but it is plain that the connexion of albuminuria with the administration of salicylic acid is something more than casual.

The drug was administered in the cases referred to as pure salicylic acid, not, as commonly given in this country, salicylate of soda; consequently the doses were much larger than most of us would be willing to give. It was given in what are described abroad as *pains à cacheter*, and which have been introduced to the profession in this country by Messrs. Allen and Hanbury. These consist of two thin wafers, so hollowed as to hold the drug between them, their edges being then lightly glued together. The dose given was from half a gramme to a gramme—that is, roughly, from seven to fifteen grains, or rather more—so administered that five grammes should be taken each of the first three days; the quantities being then gradually diminished to three, two, and one gramme a day. In forty uncomplicated cases the joint affection disappeared on an average in three days, the quantity of salicylic acid which was employed in the treatment of each of the cases being altogether about twenty-four grammes, but there were relapses in about 40 per cent. In another group, complicated by heart or lung mischief, the joint affection disappeared rather earlier, but there was the ominous relapse of over 50 per cent. There is also attached the significant note that the earlier the remedy is given the better the cases do. Never-

theless, the author holds that with this mode of treatment the proportion of cases attacked with pericarditis or endocarditis is less than with any other, and that under its use pleurisy rarely occurs. The temperature was speedily reduced to the normal where there was no complication, and where a high temperature persisted it was supposed to be due to the pericarditis. Again, the author points out that the salicylic acid is often able to remove joint affections occurring in the course of chronic rheumatic affections, provided they are acute and affect several joints; but if these attacks are non-rheumatismal or of an exceptional kind, where only one joint is affected, or if the malady is of a non-febrile kind, it is useless.

Finally, we have a note which is not without its significance. Salicylic acid soon relieves the patient from pain, but compared with other modes of treatment it does *not* lessen the period of stay in the hospital.

The following is an exact translation of Dr. Bokkenheuser's conclusions:—

"The chief results at which I have arrived in connexion with the foregoing investigations are the following:—

"1. Salicylic acid is a specific against acute, febrile, articular rheumatism.

"2. Its essential properties consist in the power it possesses of causing the affections of the joints to disappear and the fever to yield within some few days.

"3. This result is effected with equal facility in patients of different sexes and ages; at the same time the effect is the more speedy and complete the earlier in the disease the patients come under treatment.

"4. Salicylic acid is not capable in any special degree of cutting short the disease; but it alters its character in such a way that the patients, after the lapse of the first few days, do so well that they no longer feel themselves ill.

"5. The treatment with salicylic acid does not always prevent a relapse, even if an 'after-cure' is employed; but as a rule such a relapse can be brought to yield again in a very short time.

"6. It is possible, and even probable, that the treatment with salicylic acid is often capable of preventing the outbreak of acute affections of the heart and lungs; and it is certain that these, when they do arise, pass off in a milder way than they otherwise usually do. In particular, it may be laid down that this treatment almost excludes the occurrence of an attack of pleuritis.

"7. Salicylic acid is capable of stopping, in the course of a few days, an acute exacerbation of a chronic articular rheumatism.

"8. Against monarticular pains salicylic acid is ineffective.

"9. It likewise appears to be ineffective against attacks of afebrile acute articular rheumatism, even when these are of a polyarticular and wandering nature.

"10. Against rheumatic hyperpyrexia salicylic acid has no effect.

"11. In the case of a very few patients there seems to be such an immunity against salicylic acid that it produces no effect upon them.

"12. The treatment with salicylic acid does not exclude all other methods of treatment, such, for example, as the use of baths, protective bandages, and the like.

"13. No definite contraindication to the use of salicylic acid seems to exist; but sometimes circumstances may require us to discontinue the medicine either for a time or altogether."

It will thus be seen that the Copenhagen experience of salicylic acid is very similar to our own, but no note is made of the powerful influence it seems to exercise on the ventricular systole, and the consequent modification of the first sound of the heart.

THE PATHOLOGICAL SOCIETY OF LONDON.

The thirty-fourth session of the Pathological Society has just been brought to a close. On the whole, the work of the session has been an interesting and a profitable one, and testifies to the growing interest taken in pathological anatomy. This is matter for congratulation; for there can be but little doubt that a sound knowledge of pathological anatomy is absolutely essential to the proper exercise of our profession. Although many crude points are raised, and many specimens shown, which seem to have no immediate bearing on practice, yet the bulk of the work has a very direct bearing not only on the principles, but also on the practice, of medicine and surgery.

This being the case, it behoves the Council of the Society to exercise vigilance in regard to the records and nomenclature which accompany the specimens, reports of which are admitted into the *Transactions*. We have more than once in past times pointed out that the ever-increasing number of specimens would sooner or later compel the Council to commence a system of selection and supervision. We think indeed that the time has already come, and we are confirmed in this view by the great divergence of opinion which is frequently expressed by members concerning one and the same specimen, as witnessed, for instance, at the last meeting of the session. The Morbid Growths Committee was no doubt formed with a view to remedy this difficulty, and to a certain extent it exercises a just supervision over those specimens which are submitted to it for consideration. But, at most, the work it does is very limited; for pathological work of the kind performed by the Committee demands a very great expenditure of time. The question further occurs to us whether this Committee, even with its present mode of working, is utilised to the greatest advantage. For we believe that the exhibitor of the specimen is not included in the Committee, and that their report is made quite independently of, and is appended to, the exhibitor's report of his specimen. Thus it may occur that a specimen is recorded as a "cancer," which the Morbid Growths Committee report to be a non-cancerous growth. We would suggest that the author be always included in the Committee, and that any report which appears in the *Transactions* should be the joint work of the Committee and the exhibitor. In all doubtful cases—indeed, in most cases—a good clinical history would add very much to the value of the specimen, and facilitate its interpretation.

Supervision is also required in other directions. Nor is this to be wondered at, when we remember how many of the exhibitors are young men, who are just commencing their post-mortem-room work, and to whom every specimen presents features not less novel than interesting. A great distinction, however, must be drawn between a specimen which is *novel* to the exhibitor, and one which is *rare* as a pathological occurrence.

The plan which was introduced by the President, Mr. Hutchinson, at the commencement of this session, of showing specimens by card, has, we think, on the whole, worked very well. Many interesting drawings and specimens have been shown in this manner; and this plan has largely, though not entirely, done away with the objectionable practice, so frequent during former sessions, of prolonging the meetings to a very late hour. We have also noticed, with satisfaction, that with but rare exceptions the length of the papers has been reduced to fairly reasonable proportions. For however desirable it may be that a complete history should be published, it is seldom necessary to burden an overworked society with all the details of a case at the time of the oral communication.

Among the subjects which have specially engaged the Society's attention during the past session may be mentioned the syphilitic lesions of bone as found in congenital syphilis. It will be remembered that M. Parrot, of Paris, first drew serious attention to these conditions, and that he delivered an address on the subject before the Society during the preceding session. Since that time much attention has been devoted to it, and specimens of the disease in various stages have been shown by different exhibitors. On the whole, however, considering the extent of the Society's operations and the number of workers, the amount of bone-syphilis brought forward has been comparatively small. At one of the meetings it was stated—and we entirely agree with the statement—that the exhibition of mercury exercised an important curative influence on these lesions. It may be that this scarcity of pathological specimens is mainly due to the treatment by mercury, which is so general in this country.

Congenital malformations of the heart have been shown in considerable numbers and in great variety. Morphœa and other skin diseases have been discussed. Cancer also has come in for a large share of attention, and, considering its own life-history and its influence on mortality, it is well worthy of this attention. We fear, however, that pathologists are still far from agreed not only as to what cancer is when developed, but also as to its sources. The subject is one regarding which we have yet a vast deal to learn.

The Society has this session departed from the recently established practice of discussing some subjects specially selected for the purpose. But the subject of Rickets has been selected for discussion early next session. The debate on the occasion will be opened by Dr. Hilton Fagge. Rickets is a very large subject, and will therefore afford material for a very interesting discussion. The disease, if such it may be called, is very widely diffused. It is not confined, as is popularly supposed, to the poorer classes, but seems to affect both sexes and all classes. Under certain circumstances it also occurs in animals, in which, too, it can easily be artificially produced. We do not know whether it is the intention of the Society to publish beforehand the headings of the debate. Such a course would, we feel confident, facilitate the discussion and prevent the debaters from dwelling exclusively upon individual points to the neglect of the more general aspects of the subject in hand.

THE WEEK.

TOPICS OF THE DAY.

A MEETING of the Council of the Hospital Sunday Fund was held on Monday last at the Mansion House, when all the necessary arrangements were made for the annual collections on the 13th inst. The Lord Mayor promised to make the usual appeal, and to attend the morning service to be held at St. Paul's Cathedral, and the afternoon service at Westminster Abbey, on Sunday week.

Last week the ceremony of opening a new hospital at Twickenham was performed by H.R.H. the Duchess of Teck, in the presence of a numerous company. The building, which is to be called St. John's Hospital, has been erected and endowed by the munificence of Miss Twining. After a special service, appropriate to the occasion, had been performed by the chaplain to the institution, the Duchess was conducted round the wards by the Honorary Secretary, Sir G. Bourchier, K.C.B., Dr. Benthall, the Resident Surgeon, and other officials, and she expressed herself much pleased with the excellent arrangements made for the comfort and care of the patients. The building was then formally declared to be open.

A recent inquest, held at Silvertown, North Woolwich, elicited a by no means satisfactory statement of affairs existing in that locality. The evidence showed that two men, deceased, had lodged with a shopkeeper named Lewis, close to Silvertown station. A few nights previously they came home about half-past ten o'clock the worse for drink, and retired to bed. An hour afterwards the landlady heard a crackling noise, and on going upstairs found her lodgers' room on fire. Owing to the absence of water scarcely anything could be done to check the progress of the flames; and several of the jury stated that the water service, which was nominally constant, had been practically stopped for a fortnight. The Coroner remarked that he had just seen children begging for water at the railway-station, and he advised the jury to send a strong remonstrance on the subject to the water company. Such a state of things should surely be inquired into without delay, and it is the business of the local authorities to ascertain the cause, and remedy the defect before more serious consequences ensue.

The ingenuity of lawyers brought the Hampstead Hospital case—the Managers of the Metropolitan Asylum District *v.* Hill and others—before the House of Lords on the 28th ult., to argue a question raised as to the competency of an appeal brought from an order of the Court of Appeal. It will be remembered that the original case, that of Sir Rowland Hill and others against the Managers of the Metropolitan Asylum District, was tried at great length before Baron Pollock, and that the jury answered in favour of the plaintiffs all the questions left to them by the judge. The defendants then argued that, notwithstanding the finding of the jury that the maintenance and carrying on of the Hospital was a nuisance, they were entitled to a verdict, on the ground that they were authorised by statute to carry on the Hospital. The judge decided this point against them, and they appealed from his decision to the Court of Appeal, who affirmed it. The defendants also moved the Queen's Bench Division of the High Court of Justice for a new trial, on the usual grounds; and the Court granted a rule absolute for a new trial, leaving the costs of the first trial to follow the event. Against that decision the plaintiffs appealed, and the Court of Appeal directed that there should be a new trial, provided the defendants paid the costs of the first trial within two months. The plaintiffs then appealed to the House of Lords against both the decisions of the Court of Appeal, the appeal against the second referring only to the condition imposed precedent to the new trial. The question now raised was whether the appeal was one with regard to costs only, and, therefore, one which, according to established rule, the House of Lords would refuse to entertain. It was argued before the Lord Chancellor, Lord Blackburn, and Lord Watson; and their lordships, while upholding the rule that the House would not entertain an appeal merely in respect of costs, were of opinion that the rule did not apply to a condition imposed by the Court below. In this case the Court had granted a new trial on certain terms, and it was open to the House to entertain an appeal with respect to them. The appeal was accordingly allowed.

In the Common Pleas Division the case of Nowell *v.* Williams, after occupying the Court for some days in hearing the notes of the evidence given at the trial, and just as the argument was commenced, has been adjourned *sine die*. One of the judges has had to leave town to try election petitions.

In the Queen's Bench Division of the High Court of Justice, on May 28, an application was made on the part of the defendant in the case of the Queen *v.* Dr. Hoggan to remove the case into this Court for trial. He made an affidavit in support of the application, stating that he had offered to verify his statements by the books of the Hospital,

but that the Secretary refused to produce them, and further stating that the alleged libels were published by him *bonâ fide*, without malice, and for the public interest. The Court granted a conditional order, as prayed for. Our readers will remember that the case is a prosecution by the Secretary of St. John's Hospital for Diseases of the Skin against Dr. Hoggan, for an alleged libel on the Secretary and the Board of Management.

The three towns of Devonport, Stonehouse, and Plymouth have recently been suffering from a severe epidemic of measles. The disease, according to statements in the local press, was brought to Devonport about a year ago by a troopship from Bombay, and spread with fatal rapidity, the death-rate from this cause being at one time 80 per 1000. Recently the death-rate has fallen in one week from twenty-three to two, the Medical Officer of Health ascribing the diminution to the increased temperature relieving or preventing lung complications. It is further pointed out in the local press that the three towns are in some parts disgracefully overcrowded, and that the disease might have been arrested in the first instance if there had been a hospital for infectious diseases available for the isolation of the earlier cases. It is also stated that, in the face of repeated suggestions on the part of the Medical Officer of Health and others, no steps are being taken to provide a hospital of this description for the locality. In these circumstances it would seem to be the duty of some one in position to call the attention of the Local Government Board to the matter, more especially when it is remembered that in many smaller and less important places hospitals for infectious diseases have already been provided, with the best results.

The Medical Officer of Health for the Hackney district (Dr. J. W. Tripe), which comprises the parishes of St. John-at-Hackney and St. Mary, Stoke Newington, has just reported to the Hackney Board of Works the lowest death-rate for this time of year that he has ever recorded for that district, namely, 13·3 per 1000 of population, against 19·2 per 1000 for all London. There were only 93 deaths registered in the Hackney district during the past fortnight, against 214 births, being at the rate of 230 births for each 100 deaths. There was also a decided diminution in the number of small-pox cases.

Mr. Henry Edwards, the member of Parliament for Weymouth, has recently given £500 to the St. Bartholomew's Hospital Samaritan Fund. He met with an accident in the City a few months ago, and was conveyed to St. Bartholomew's Hospital for treatment, and the present donation is in acknowledgment of the kindness shown to him, the letter conveying the gift expressing his thanks for the attention he received at the hands of the different officials.

Our contemporary the *Indian Medical Gazette*, in referring to the recommendations of the Indian Army Commission, well observes that there does not appear to be any justification in either reason or experience for one of them—namely, that "Netley Hospital be done away with." The teaching and training which that school supplies is practical and highly valuable. "Nowhere else," our contemporary remarks, "is the same kind of education to be obtained. It is not only useful as a special school of military hygiene, medicine, and surgery, but it offers opportunities of gaining a practical acquaintance with tropical diseases, which it is of the utmost importance that the Indian medical officer should obtain."

THE MEDICAL ACTS.

The Vice-President of the Council on Education, Mr. Mundella, in replying, in the House of Commons, on Thursday evening last week, to questions put by Mr. Errington, stated that he did not see any reason for the re-appointment of the Select Committee on the Medical Acts Amendment Bills. The Committee had been appointed to report upon three Bills then before Parliament, and one of those was a Government Bill. But the present Government had no intention of introducing any Medical Acts Amendment Bill during this session, though they would consider the whole subject of medical education and registration during the remainder of the session and in the recess. The Government do not appear either to be disposed to adopt the Bill of the late Government, or to consider the matters in dispute so easy to be settled as some people appear to think them now. Their action, or, more accurately speaking, their inaction, with respect to the Committee on the Medical Acts Amendment Bills, this session, is what we expected and foretold. Whether they will next year appoint a Select Committee, placing on it as many of the old committeemen as possible, in order to take a little more evidence and obtain a report, or will adopt some other mode of seeking for information, or will rely upon "inner consciousness" to guide them in legislating for the medical profession, we have no grounds for even guessing. But the medical authorities will do well to consider that, judging from the history of attempts at medical legislation of late years, the present Government are not likely to show much regard for the licences, diplomas, or degrees of any corporation or university, and are very likely to hold that a State examination and licence shall be all-sufficient for qualification to practise and for admission to the Medical Register.

CONSULTING WITH HOMŒOPATHISTS.

At a general meeting of the Fellows of the Royal College of Surgeons in Ireland, held on Monday last, Mr. Jolliffe Tufnell brought forward a motion relative to the above matter, and intended to prevent any such practice among the Fellows of the College. The motion was, we understand, adopted.

DEATH FOLLOWING THE INHALATION OF CHLOROFORM.

A death under chloroform is reported from the Radcliffe Infirmary, Oxford. The patient was a man, forty-eight years of age, and a free liver; and chloroform was given for the reduction of a dislocated humerus of three days' standing. The anæsthetic was administered by the House-Surgeon by means of a fold of lint; and immediately upon the reduction being effected the patient was observed to be dead. Upon dissection the heart was found to be fatty; the lungs were emphysematous, and the liver also was in a state of fatty degeneration. There was, we understand, a large ecchymosis in the axilla and in the pectoral region, resulting from laceration of the axillary vein.

ROYAL COLLEGE OF SURGEONS.

At the half-yearly pass examination for the Fellowship of the College, which was brought to a close on Saturday last, there were nineteen candidates, all of whom, with one exception, were Members of the College, the dates of their diplomas ranging from January, 1865, to April last. Eleven of these gentlemen passed, and will be admitted Fellows of the College at the next meeting of the Council on the 10th instant, until which the names of the successful candidates cannot be published. The following were the questions on pathology, therapeutics, and surgery submitted to the candidates at the written examination, when they were required to answer all the questions, viz.:—1. Describe the changes which may be found in the spinal cord after death from injury to the spine. 2. Describe the structure, development, and course of the various forms of cystic tumours of the mammary gland. 3. To what causes may a rise of tempera-

ture, after a severe injury or operation, be due? Describe the circumstances which would influence your view of it, in relation to diagnosis and prognosis. 4. What are the diseases which may cause obstruction of the nasal fossæ? How would you distinguish them from each other? Give the treatment you would adopt in each case. The clinical cases on which the candidates were examined consisted of a diseased carpus, large femoral hernia (reducible), disease of the testicle, orbital tumour, irreducible omental rupture, periostitis of the lower end of the femur, strumous abscess of the testicle, disease of the elbow-joint, synchysis of the vitreous humour, sarcomatous tumours in various parts of the body of the same patient, pharyngeal tumours, large carpal bursa, large tumour under the pectoral muscle, enlarged bursæ on the nates (weaver's bottom), tumour on the skull, rodent ulcer on the temple, abdominal tumours, strumous glands in the neck and strumous affection of the ulna, suppurating sebaceous cyst in the nose, &c. They were selected from the following hospitals, viz.:—St. Bartholomew's, Guy's, St. George's, the Middlesex, King's College, University College, and Moorfields Ophthalmic. A new feature was introduced on the present occasion: after the usual operations on the dead body, the candidates were again called into the theatre, and examined in surgical anatomy.

THE VIVISECTION QUESTION IN GERMANY.

Professor Virchow, speaking the other day at the Committee to which the petitions to the German Reichstag against vivisection were referred, observed that the agitation was not only against vivisection, but endangered the entire experimental method. As, heretofore, Harvey's discovery of the circulation only became possible by means of experiments and researches made on living animals, so at the present time they are necessary in physiology, pathology, and pharmacology, neither research nor instruction being able to dispense with them. Many branches of science could not be carried on without them, and especially the physiology of the nervous system. In England, the laws against vivisection have done so much mischief, he added, that since their enactment no physiological work of any importance whatever has been accomplished. The Committee resolved to propose an order of the day, declaring that, in the interests of physiological inquiry, it is indispensable that vivisection should be carried on in educational institutions.

THE HEALTH OF THE PARISH OF ST. MARYLEBONE FOR APRIL LAST.

In his monthly report on the health of the parish of St. Marylebone for April last, Dr. John Whitmore, the Medical Officer for the district, shows that the mortality was equal to an annual death-rate of 22·30 per 1000 of the population, and, having regard to the late long prevalence of north-easterly winds, this return cannot be regarded as unfavourable. Amongst diseases of the zymotic class seven deaths occurred from measles, nine from scarlet fever, and twenty-three from whooping-cough. Fifty-two deaths from bronchitis testified to the low temperature of the month, the number being somewhat large for the season of the year. One death only occurred in the parish during the period from small-pox, and this case was certified as confluent and unvaccinated. Dr. Whitmore calls attention to the numerous cases of suffocation of infants whilst sleeping in the same bed with their parents. No fewer than five deaths were referred to this cause during the month under notice, attributable to the fact of one or both parents retiring to rest in a state of intoxication. The number of deaths registered at the workhouse during the month was thirty-nine, and at the Middlesex Hospital twenty-seven; of these latter five were from cancer.

THE ELECTION ON THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS.

It appears that the number of candidates for the four vacant seats in the Council of the Royal College of Surgeons, that will have to be filled in July, will be larger, and consequently the contest more exciting, than seemed probable when we last noticed the subject. Then we gave the names of five Fellows as being probable candidates, but now nine are spoken of as being almost certain to present themselves for the honour of election. We give their names in the order of their standing:—Mr. Cadge, of Norwich, August, 1848; Mr. W. Adams, 1851; Mr. Lister, F.R.S., December, 1852; Mr. T. Bryant, May, 1853; Mr. Sydney Jones, 1856; Mr. J. W. Hulke, F.R.S., May, 1857; Mr. T. Smith, June, 1858; Mr. Berkeley Hill, November, 1859; and Mr. Reginald Harrison, of Liverpool, 1866. There cannot be much difficulty in selecting four good and efficient Fellows out of this list, even should the voters on this occasion, out of regard to the business efficiency of the Council, think it desirable to elect only resident Fellows. The provincial candidates are, however, unquestionably good men. Mr. Cadge was first in the field by some weeks, is much the senior of the two, and lives near enough to London to enable him to take part in the detailed work of the Council besides attending Council meetings. Mr. Harrison, distinguished as a provincial teacher as well as surgeon, was invited to come forward by a memorial signed by 170 Fellows of such influence and standing that it must have much weight, and be very gratifying to himself. We must think, however, that his friends make a great mistake in claiming, as they apparently do, that each large provincial city and school shall be separately represented in the Council, as well as provincial surgeons.

THE ARTISANS' DWELLINGS ACTS IN DUBLIN.

On Monday, May 31, Dr. Frederick MacCabe, Inspector of the Local Government Board for Ireland, and Mr. C. F. Cotton, C.E., held an inquiry at the City Hall, Dublin, into a proposed improvement scheme, under the Artisans' Dwellings Acts of 1875 and 1879, for one of the worst districts in Dublin, known as the "Plunket-street Area." It appeared from the evidence of Mr. A. Dudgeon, C.E., that the area included in the scheme contained 3a. 2r. 32p., which, after provision for wide streets, etc., would yield a space for building 123,752 feet. There were at present 156 dwelling-houses in the area, of which 143, or 90 per cent., were tenement houses, and of these 91 per cent. were unfit for occupation. Sixteen houses were actually in ruins, twenty-four were incapable of repair, and only 113 were in a fair state of repair. Ninety houses were supplied with water from a street fountain, and had no water-taps of their own. The sanitary accommodation was extremely limited. The number of inhabitants was 1619, of whom 1556, or 96 per cent., occupied the tenement houses. Of the houses 28 per cent. were overcrowded, and 36 per cent. of the inhabitants occupied overcrowded rooms; 562 individuals having on the average 237 cubic feet of air space, although 300 cubic feet was the minimum fixed by the Public Health Act. He had made a valuation of the houses, land, and buildings proposed to be acquired, and found the total to be £12,570. Adding the costs of clearance and of construction of roads and sewers, the aggregate would be £16,570. Mr. Spencer Harty, C.E., who had prepared the details of the scheme, said that the entire area was in a most unhealthy condition. In Blackhall-row there was absolutely no such thing as sanitary accommodation, and other parts were very bad indeed in respect of sanitary conveniences, these, where provided, being disgraceful in character. Dr. E. D. Mapother, Consulting Sanitary Officer, said that so far

back as the year 1876 he had made an official representation to the Municipal Council on the subject of this area, and in October last, after a further and complete investigation, he repeated the representation. The place was a focus of disease, and was one of the worst spots in Dublin in consequence of its narrow passages and insanitary condition. If there were an epidemic in Dublin it always fixed itself there, and it furnished a large proportion of cases to the hospitals. The condition of the place was quite irremediable unless by total removal of the houses. Dr. J. W. Moore stated that he had long since formed the opinion that this area was one of the worst districts in Dublin. As Physician to the Cork-street Hospital he had treated a large number of fever and small-pox patients coming from that locality. Within the past six years 177 cases of fever and small-pox had been admitted to that Hospital from two only of the streets included in the area. Dr. Charles A. Cameron, Medical Officer of Health for the City of Dublin, and the parochial clergymen, gave corroborative evidence. In the presence of such facts as those revealed in this inquiry we can hardly wonder that the death-rate of Dublin is so high as to make that city a byword and a reproach.

THE HEREFORD COUNTY AND CITY LUNATIC ASYLUM.

The eighth annual report for the year 1879 of Dr. Chapman, Medical Superintendent of the Hereford County and City Lunatic Asylum, at Burghill, near Hereford, contains some remarks on the altered conditions under which patients are now sent to lunatic asylums. The admissions at Burghill during the past year, he says, presented fewer curable cases than usual. Of 40 males admitted, only 9 presented any reasonable expectation of recovery; of the 59 females received, only 27 presented such conditions; or, taking Herefordshire patients only, 74 patients presented only 34 probably curable cases—that is to say, 45 per cent. Time was when admissions used to present over 60 per cent. of curable cases. This difference is caused not by keeping curable cases out of the Asylum till they are incurable, but by adding to the curable a number of incurables, chiefly idiots, paralytics, and aged. Thus, of the 46 female admissions from Herefordshire, no less than 10 were over seventy years of age, and 3 over eighty. It would appear now, therefore, to be held reasonable and proper to consider those afflicted with all forms of idiocy and imbecility suitable inmates of asylums rather than of workhouses, where no special management and supervision for such cases can be efficiently provided; and this state of things is likely to continue unless the country can be provided with imbecile asylums, in the same manner as has been done in London by the Metropolitan Asylums Board. The mortality at Burghill during the past year was lower than in any previous year, except 1877, and only two asylums in the country showed a lower rate; there was no outbreak of epidemic disease, and no death from suicide or accident. The average weekly cost of each patient during the year was 8s. 11d.

BIRMINGHAM MEDICAL BENEVOLENT SOCIETY.

The fifty-seventh annual meeting of this association was held in Birmingham on May 28; Dr. Nason, of Stratford-on-Avon, president, in the chair. The report stated that the invested funds of the Society amounted to £9560, and that £395 had been dispensed in grants during 1879. A legacy of £100 had been received from the executors of the late Mr. Pye-Chavasse, a former trustee. Dr. Nason handed in donations amounting to £71. The following officers were elected:—*President:* Mr. W. H. Sproston. *President-elect:* Dr. Fitch, Choddesley. *Vice-Presidents:* Mr. Batten, Bromsgrove, and Dr. Jordan. *Treasurers:* Dr. Wade and Mr. Bartleet. *Trustees:* Dr. Foster, Mr. W. C. Garman, Wednesbury, and Mr. J. F. West. *Honorary Secretary:* Dr. Sawyer. A vote of thanks was given to Mr. Bartleet, who for the last five years had assiduously devoted himself to the affairs of the Society in the office of Honorary Secretary, and whose exertions had yielded a large increase of new members. After the meeting the annual dinner took place at the Grand Hotel, the chair being occupied by Dr. Nason, and the vice-chair by Dr. Sawyer.

THE GLASGOW ROYAL ASYLUM FOR LUNATICS.

The sixty-sixth annual report of the Glasgow Royal Society for Lunatics, Gartnavel, for the year 1879, was presented and passed at the annual meeting of subscribers held on January 15 last. The report contains very little that is noticeable, if we except a remark of the chairman to the effect that lunacy was largely on the increase in Scotland. The directors also placed on record their regret at the lamented death, in October last, of Dr. John Gibson Fleming, who had held the office of Surgeon to the Asylum since the year 1839. He had previously acted temporarily as its Medical Superintendent, and his first connexion with the institution was at least ten years earlier, when Dr. Balmanno was the Physician. The present Physician-Superintendent, Dr. Yellowlees, in his retrospect for the year 1879, shows that there were 532 patients in the Asylum at the beginning of the year, and 180 were admitted during its course, so that the number under treatment was 712. Of this total 136 were discharged, and 47 died; the discharges included 57 recoveries, and in addition 41 patients were sufficiently restored to return to home and friends, although the restoration was not so complete as to justify their being reckoned as recovered. The deaths were in the exceptionally low proportion of 8·7 per cent. of the average number resident. Brain disease, in some form, was the most frequent cause of death, and lung disease came next in frequency, its acuter forms being commoner among men, and its slower forms among women.

PROFESSOR HUMPHRY'S REDE LECTURE.

The Rede Lecture was delivered on the 26th ult., in the Senate House, Cambridge, by Dr. Humphry, F.R.S., Professor of Anatomy, to a very large audience. The Professor's subject was, "Man: Prehistoric, Present, and Future." He explained that the differences between man and other animals consist in the proportions and relations to one another of the several parts of the body, more especially in the balance of the head and trunk upon the lower limbs, the size of the lower limbs, the size of the brain, and the repression of the jaws. He exhibited and described the skulls of the earliest known inhabitants of this island, pre-Celtic and Celtic; and he demonstrated that these crania, so far from showing approximation to the brute, are, on the contrary, refined and well-proportioned, with a brain-cavity larger than the average of modern Europeans, and marked on the interior in such a way as to indicate that the convolutions of the brain were as numerous as now. The bones from the old caves discovered in this country, and from older caves on the Continent, all told, he said, a like tale of ample brain-space, and of good formation of limbs, and unquestionable human character; and some of these people, represented by these bones, were undoubtedly coeval with the mammoth, approaching therefore to, and perhaps going back beyond, the glacial period. Commenting upon the inferences to be drawn from the different forms of skull and the brain, the Professor observed that, strong as was the probability that the appearance of man upon the earth was the result of some great law of evolution, by which the various living forms were produced and regulated, yet

our knowledge of that law is yet in its infancy, and that a vast amount of investigation, carefully carried on after the philosophic method of Mr. Darwin, will be required before we ought to venture to dogmatise upon it. The geological record had hitherto, he said, given no indications of the evolution of man; and it was hardly to be expected that any would now be discovered in the northern hemisphere, though perhaps search in the bowels of the earth beneath the dry land or under the oceans of the southern regions might yield some information on the subject. Professor Humphry then dwelt upon the subject of the correlation of the physical and the mental powers, and upon the importance of maintaining a vigorous physique as the foundation of good mental power. He insisted on the value of sanitary legislation, affirming that therein lies the most important work of the future, and he enlarged upon the necessity of a fuller and more general apprehension of the laws of health, and of a clearer appreciation of the interdependence of the intellectual, the moral, and the physical states of man. And people must not suppose that good could be done by any narrow-minded attempts at cutting off one article of diet or totally abstaining from another. What is really needed is moderation in all things, which is true temperance, and the true trial of man. He touched on the difficult question of improving the human race by judicious arrangements with regard to matrimonial selection. "I am not aware," he said, "that any such arrangements have ever been seriously contemplated—and the time is not yet ripe for them,—but I cannot doubt that something will be done in this direction when the attention of the people and of their legislators shall be sufficiently roused to the importance of providing for a healthful race in future." In concluding his eloquent lecture, Professor Humphry said: "After all, to the burning questions, Whence? and Where?—Whence camest thou, O man, and whither goest thou?—to which it might have been expected by those who do not fully recognise their difficulties that I should make, as regards the body at least, some answer, I am compelled to reply that we find ourselves simply floating on the streams of time. Sufficient for the day must be the knowledge thereof. Whether we peer fore or aft, it is obscurity. We are still children crying in the night, children crying for the light, and with no language but a cry."

HOSPITAL APPOINTMENT.

Dr. A. Smart, of Edinburgh, has been appointed Assistant-Physician to the Royal Infirmary of that city. Dr. Smart has many qualifications for the appointment in question. An able and industrious student, he became Resident Physician to the Infirmary on graduation, and during his tenure of office made important observations on diabetes, dietetics, and small-pox. On leaving the Infirmary he commenced practice as a physician, but, true to his scientific instincts, he found time, on the invitation of the Lord Provost and magistrates of Edinburgh, to investigate in an exhaustive manner the cattle plague on its first appearance in Britain. His memoir on cattle plague, as it was the first, is also one of the best on the subject, and has been translated into several languages. It is in every respect a model research. Dr. Smart, at a subsequent period of his career, engaged in teaching the Institutes of Medicine at Surgeons' Hall, and at the School of Arts, Edinburgh; and proved himself an enthusiastic and efficient teacher. The appointment of Assistant-Physician to one of the largest hospitals in the kingdom will open up a new field of work to Dr. Smart; and his previous training, his ripe practical experience, and his very decided proclivities for scientific medicine, point him out as likely to advance the reputation of the Edinburgh school and the great Hospital with which he will henceforth be identified.

MEDICAL PARLIAMENTARY AFFAIRS.

Medical Education.—In the House of Commons, on Thursday, May 27, Mr. Mundella, replying to Mr. Errington, said that the Select Committee appointed last session was instructed to report upon three Bills, and not to inquire into the working of the Medical Acts. The Government will take the whole subject into careful consideration during the remainder of the session and in the recess. He sees no reason for the re-appointment of the Select Committee on the Medical Acts.

County Government.—Mr. Gladstone, in reply to Mr. Magniac, said he did not know when it would be possible to introduce a Bill for the better government of counties. The subject was one which, in the estimation of the Government, stood in the first rank as regarded urgency.

Supply.—On the vote for Supply, on behalf of the Local Government Board, Mr. Barclay moved that it be reduced by £100,000, as he desired more grants for medical aid in Scotland. Mr. Dawson complained of the insufficiency of the supply of lymph at Dublin, and moved a reduction of the vote in consequence. Dr. Lyons hoped the vote would be increased, to enable the Government to give aid to scientific bodies. Vaccination in Ireland he considered very efficient. Mr. Dodson said they certainly could not increase the vote.

Water-Supply.—On Monday, May 31, Sir William Harcourt, in reply to Mr. Brand, said that the Government have resolved to refer the provisional agreements with the water companies to a Select Committee, as also to inquire into the powers which the companies claim for increasing their rates, and to report upon the desirability or not of effecting the purchase of the same, or of endeavouring to obtain a better supply from other sources. He regretted that this subject should need to be dealt with by the Government. He hoped the present Parliament would endeavour to create a central municipal authority having power to deal effectually with all subjects affecting the ratepayers of the metropolis.

Vaseline in Gynæcological Practice.—Dr. Sinety observes that fatty bodies are more employed in this branch of medical science than in any other, whether for the different modes of exploration or as excipients of medicinal agents. Oils and cerates have the great inconvenience of easily becoming rancid. This is not prevented by the addition of carbolic acid, for, powerful as this is over the organisms which induce putrefaction, it does not prevent certain chemical transformations, and oily substances to which it has been added contract in a short time a very disagreeable odour. Glycerine, which is sometimes very useful as a therapeutical agent, is not at all suited for facilitating the introduction of the finger or of instruments. Vaseline, which has hitherto been chiefly used in ophthalmic ointments, forms an excellent means of applying substances to the os uteri, and admits of being combined with iodine, belladonna, and other substances. Combined with carbolic acid it may be used for smearing the finger and the various instruments, etc., prior to their introduction into the vagina. —*Archives de Tocologie*, April.

Suicide by means of a Guillotine.—The *Boston Medical Journal*, April 29, reports a remarkable case of a young man who erected a machine by which he was enabled to guillotine himself effectually, having previously placed beneath the place where his head was to lie more than a pint of ether, which he might inhale while the axe descended. This last point was regulated by means of a suspended watering-pot, which, leaking, at last released a short axe, together with a box weighted with 50 lbs. of stones so as to secure the descent of the axe with sufficient force. After the release of the box and axe they had a descent of six feet and a half, and decapitated him. A diagram is given of this remarkable apparatus, which was made of material found in an old barn. In the article narrating this occurrence reference is made to another very similar case, which happened at a town in Indiana in 1876, the apparatus employed being of a still more elaborate character. Both these men were of good habits of life, happy and prosperous, and both of them had always manifested great familiarity with accounts of criminals, modes of suicide and of punishment. In one of the cases an hereditary taint of insanity seemed probable.

FROM ABROAD.

Professor Pasteur and the Vaccine Virus.

Like some physicists and chemists in our own country who think that they see a short cut to the solution of problems which still vex medical observers, Prof. Pasteur is of opinion that his recent experiments on the production and prevention of "chicken-cholera" (*Medical Times and Gazette*, May 22, page 563) throw quite a new light upon the question of the community of origin of variola and vaccinia, and prove the Jennerian doctrine to be entirely at fault. This has taken the Academy somewhat aback, and we cannot better express the feeling that was produced than in the words of an able critic writing in the *Union Médicale*, May 27:—

"Prof. Pasteur and the germ theory have undergone a somewhat serious check at the Academy; and the chicken-cholera may prove for the learned experimenter the Tarpeian Rock as well as the Capitol. Up to the present time the Academy seemed to have submitted without resistance to the somewhat authoritative and haughty intervention of M. Pasteur in the study of different medical questions. Received with deference and even with sympathy into this learned body, which felt proud in counting among its members this great illustration of contemporary chemistry, side by side with its Wurtz, Berthelot, and others, M. Pasteur lost no time in speaking, perhaps in somewhat the tone of a master amidst a medical body.

"Since he has made known to the Academy the results of his researches and experiments on chicken-cholera, and since his discovery of 'vaccination' in chicken-cholera, it has seemed to him that he was about to inaugurate a new era in the knowledge of zymotic diseases—or rather, that the knowledge of these diseases only dated from this discovery. With respect to vaccinia and variola, M. Pasteur has declared that the opinions of those physicians who admit their community of origin are only based on vague observations, or rather on simple impressions; for according to him there exists no proof of the truth of the doctrine which makes of the horse-pox, the cow-pox, and the human virus vaccinia, one and the same virus—that is, the product of the variola of animals inoculated to man. There exists, in fact, no other proof of the community of origin of vaccinia and the variolous virus than the results of M. Pasteur's experiments on chicken-cholera. By cultivating the *microbe* of the chicken-cholera he has discovered a virus of such excessive virulence that it has the property of killing all the fowls inoculated with it. Pushing his experiments farther, he has discovered, by a procedure the secret of which he has carefully kept, an attenuated virus, and fowls inoculated with this are preserved from the consequences of their inoculation with the mortal virus. In a word, he 'vaccinates' them and prevents them contracting henceforth the disease termed chicken-cholera. Now, reasoning from analogy, M. Pasteur professes to conclude from what takes place in chicken-cholera as to what should take place in variola and vaccinia. Vaccinia can be nothing else than attenuated human variolous virus, and in order to obtain this it is nowise necessary to cause the intervention of the passage of this human virus though the organism of animals, as has been believed until the present day.

"At the announcement of this doctrine, which makes a *tabula rasa* of all observations that have been made since the time of Jenner, and especially of the peremptory demonstrations which gave rise to the celebrated discussion at the Academy of Medicine in 1868, several members demanded permission to reply to Prof. Pasteur. It was M. Jules Guérin who, with an impetuosity and vivacity still always juvenile, commenced the attack; and he was vigorously sustained by M. Blot, and especially by Prof. Depaul, who, imprudently provoked by M. Pasteur, dealt to the author of the chicken-cholera the most direct and terrible blows. He eloquently avenged medical observation and tradition for the attack directed against them by M. Pasteur, who, he declared amidst the applause of the Academy, would endeavour in vain to destroy by his laboratory experiments the great principles upon which medical science reposes."

The following are Prof. Depaul's observations as reported in the *Bulletin* of the Academy:—

"I should have preferred not speaking on the important question raised by Prof. Pasteur, as it is one that cannot be fruitfully treated off-hand, but I cannot resist the good-natured provocation of our colleague. But first of all I must assure him of the great deference I feel for his talent and his person, and no one can admire more than I do his love for science, and the care he bestows on his laboratory researches. Still, he must permit me to say that I think he accords an exaggerated importance to these, and that he treats too lightly the observations of physicians on questions which are essentially medical. He appears to me to forget that medicine does not date from to-day, and that it long did without the microscope and chemistry, which did not prevent it rising, with respect to the origin and treatment of disease, to a degree of perfection that has not been much increased since the new conquests of science have been placed at its disposal. If, better prepared by special studies, Prof. Pasteur had read all that has been written on the origin of vaccinia and on its relations to variola in man and animals, he would have been struck by the important fact that epidemics of variola had often been preceded by epidemics of cow-pox and horse-pox, and reciprocally; and he could not have refused to see in this coincidence one of the proofs of the close tie which connected these affections. Physicians who have taken account of it have not, however, contented themselves with this relationship, but have sought in general and local characteristics for other proofs of conviction; and, finally, they have sought from inoculation, repeated under the most varied conditions, additional testimony which has always proved affirmative. What could they do more to give them a right to pronounce their opinion? And yet it is when science is founded on so solid a base as this that M. Pasteur hopes to overthrow it by means of certain experiments performed in a laboratory! I have nothing to say against his *culture des microbes*, and I accept, while declaring my incompetence, all that takes place in his retorts; but when he ceases to be the skilful experimenter we all know him to be, and proceeds to his applications to medicine, I must ask permission to be no longer of his opinion. Thus, for example, in his recent communication on chicken-cholera, in which his discovery of a new *microbe* has opened to him so large an horizon, I find him drawing conclusions which are not in accordance with his premises. How does he prove that these infinitely minute beings are the true cause of chicken-cholera? Might it not be sustained with just as much probability that they are the result of the disease? We are positively told that fowls inoculated with the *liquide de culture* died of cholera; but our learned colleague has forgotten to furnish the proof of this. A sole fact is incontestable, and that is the death of these animals; but as concerns the symptoms which they presented, I do not find them resembling those offered by the animals which succumbed to the spontaneous disease. They died poisoned,—and that is all that can be said about them, if we do not wish to enter upon the field of hypotheses and preconceived ideas. I repeat, in conclusion, I regret that I cannot partake of the hope which Prof. Pasteur has conceived of resolving the questions of the origin of variola and vaccine by his experiments on chicken-cholera."

Thoracentesis.

Dr. Knight read, at the Boston Society for Medical Improvement (*Boston Med. Journal*, April 22), a paper "On the Dangers of Thoracentesis and Injections into the Pleural Cavity," which elicited some interesting observations from Dr. Bowditch.

Dr. Knight observed that so many accidents following these operations had been reported, that it behoved those who were in favour of thoracentesis to inquire into their nature. Most of the reported cases may be grouped under three heads—(1) Embolism, (2) Syncope from paralysis of the heart or from reflex action, (3) Pulmonary œdema. Emboli are let loose by the expansion of the lung, and thoracentesis simply hastens this, which would occur at all events whenever the lung expanded. Cases of embolism occur when no operation has been performed, so that the indication really is to perform thoracentesis early before thrombi are formed. Fatal or dangerous syncope and pulmonary œdema have [illegible] in some cases due to the operation; and the convulsi[illegible]

have occurred during injection into the pleural cavity have been attributed to embolism of the cerebral vessels or reflex action. There are also remarkable coincidences between tapping the chest and death from causes quite independent of the operation. The following rules should be observed:—1. Operate early, before thrombi are formed. 2. Operate in the recumbent posture to prevent cerebral anæmia. 3. Evacuate very slowly, and never remove large quantities at one sitting. Stop on the occurrence of the slightest distress. 4. Be very careful in removing fluid when the lung is diseased, or bound down by adhesions, and so incapable of expansion. Some of the worst accidents have happened in such cases. Great care is especially required when injections are used, and the use of syringes and pumps should be abandoned altogether, the chest being only slowly irrigated by means of the douche, the reservoir being held only just high enough to secure a gentle current.

Dr. Bowditch said that he had come to learn what dangers there were in thoracentesis. Since 1850 he had operated 357 times upon 226 patients, and he had never had any death which, in his opinion, could be fairly said to be due to simple aspiration. He attributed the great number of deaths which had of late years been recorded to the rash way in which injections are employed; and he thinks that these cases should not be allowed to prejudice the operation in which simple aspiration is performed, or a permanent opening made by trocar or incision. He had consented, occasionally, to the use of injections, when called in in consultation, especially since carbolic acid has been brought into use; but in his own cases he has never resorted to them unless the pus became fœtid. Dr. Bowditch believes that one reason why the sudden fatal results which are recorded as having occurred in Europe have not been met with in the United States, is that more caution is employed in the operation. From the commencement of his practice he has always drawn off the fluid slowly, cautiously, watching the effect which the withdrawal of each ounce has upon the patient, and frequently questioning him as to the existence of any unpleasant sensation about the chest during the operation. The moment any sense of *stricture of the chest* is perceived, he removes the aspirator, and that even if he is certain that a very large quantity of fluid still remains in the pleural cavity. He had been induced to act thus, because in one or two of his earlier operations he had caused an unpleasant, though never dangerous, dyspnœa by persisting in the operation, even for a short time. Nature often seemed in such cases to say, "Take away a little fluid, and I will take care of the remainder." Dr. Bowditch regarded aspiration as simple an operation as vaccination. He would as soon do one as the other; and because occasionally a patient died in pricking his skin, or even before the skin was touched, was no solid reason against the operation. The question of a permanent opening and injections into the chest is a wholly different affair, and he was in great doubt as to when, if ever, such openings should be made. Thirty years ago he opposed all permanent openings with the scalpel as improper and barbarous operations. But he soon found that nature at times made them, and then he had to interfere in order to get the opening in a proper part of the chest. Two years ago he stated at the American Medical Association that he was of opinion that, in adult cases, a permanent opening should be made after pus had been twice drawn off. Recently, however, a case had been sent to him for advice as to further operation. Sero-purulent or purulent fluid had been removed by twenty-two aspirations at very short intervals—generally every third day. Under this treatment the patient had gradually grown better, having gained flesh and strength. Murmur could be heard without râle throughout the left side of the chest, but less than on the right. Behind was flatness on percussion in the lower two or three inches, and murmur was scarcely, if at all, heard there. No other marked symptom, except cough and some expectoration. It was asked, whether a permanent opening should be made in the chest to allow the small quantity of fluid still remaining to escape, upon the ground that nature would remove it. Dr. Bowditch strongly advised that no opening of any kind should be made. He suggested that in some cases the same treatment here adopted might be followed with advantage, repeating the aspiration every three days for a month, in the hope that the lung, expanding, would gradually contract adhesions, as evidently had occurred in this case. Dr. Bowditch could see no reason *à priori* why purulent absorption should not take place from the pleural cavity, as it does at times in other parts. Dr. Ellis believed that such absorption was possible and probably often occurred. He also was in favour of repeated aspirations, which would keep down the size of the cavity, so that if a permanent opening had to be made it would be more likely to be successful. Dr. Curtis stated that of sixty-nine cases treated by aspiration, in only one (in which half a pint of serum had been withdrawn) was the operation followed by distress. The following night the patient was restless, with dyspnœa and nervous agitation. Next day he remained in a stupid state, with a temperature of 104·1° Fahr. Seventeen days later he was discharged relieved, respiration being heard at both bases, accompanied by subcrepitant râles. Dr. Fritz observed that the result of the permanent retention of pus could hardly be regarded as different from that of fibrin, both being exposed to the same conditions. It was not a very rare occurrence to find encapsuled within the chest either cheesy, mortar-like, or greasy material, representing the results of a previous pleurisy. In such cases the appearances were not sufficiently characteristic to enable the observer to decide whether the original process were an empyema or a fibrinous pleurisy. With regard to the recommendation that thoracentesis should be performed while the patient was lying down, it would seem that, if cerebral anæmia had to be avoided, this could be better done by operating in the upright position. The earlier and slighter symptoms could thus be more readily detected and relieved. If the patient were in the prone position the anæmia would be likely to have reached a greater degree before prominent symptoms appeared.

REVIEWS.

An Atlas of Human Anatomy, illustrating most of the Ordinary Dissections and many not usually practised by the Student; with Explanatory Text. In twelve parts. By Rickman John Godlee, M.S., F.R.C.S. London: J. and A. Churchill. 1877-1880.

We have already referred to some of the earlier parts of this Atlas; but as it is now practically finished, it may not be unprofitable to review it as a whole. First, the regularity of its issue—so contrary to custom, and especially foreign custom—commends itself and calls for praise. Next, as to the general execution of the work, the latter numbers more than deserve what we said of the earlier ones, for they bear the impress of the greater mechanical skill which the author could hardly fail to have acquired as the result of greater familiarity with his work. There is probably no other atlas published which is entirely the work of one man—dissections, drawing, and text. This is the case in the work before us, and Mr. Godlee is therefore to be specially congratulated in his threefold capacity of anatomist, artist, and author.

We should scarcely be doing ourselves justice if we were to abstain from expressing our regret that the drawings are for the most part rather small; but this is less a criticism than the expression of an opinion, which may or may not be re-echoed by the majority of those who will consult the Atlas. There can, nevertheless, be little doubt that the various structures would have been more easily recognised if the scale of the drawings had been somewhat enlarged. On the other hand, one of the objects of the publishers was to provide a complete atlas in a comparatively small compass and at a moderate cost; and they have succeeded admirably well in their endeavours. Mr. Godlee, in his prefatory remarks, says that one object of the plan he has adopted—that of illustrating parts not usually seen in the dissecting-room—has been to enable the student to understand the mutual relations of parts which, in following the ordinary course of instruction, he is apt to regard as separate and independent. He has aimed also at teaching how parts should be systematically dissected; and thus, as plate follows plate, the deeper parts of a given subject are, turn by turn, exposed in due anatomical sequence. Seeing that the College examination papers now always contain a "dissection question," students will do well to bear this in mind, and, by a study of Mr. Godlee's teaching and method, will see that to answer such a question well, the various parts referred to must be given in due and natural order and sequence as they present themselves in a systematic dissection. It is no easy task, in the limited space

at our disposal, to refer to the individual excellences of a large work of this kind, so we must content ourselves with the less agreeable but only alternative of referring to some of the points on which we are hardly in accord with our author, or on which we should have preferred more ample information.

On page 197 (Part VI.), when speaking of hernia, the author says: "The diagnosis depends upon the fact that the pubic spine is external to the neck of an inguinal, but internal to that of a femoral, hernia." This is surely an anatomist's idea, rather than that of a practical surgeon; for, irrespective of the difficulty of accurately feeling this point in a fat subject, we should question whether, in a large proportion of cases, this really is the fact surgically, although doubtless, anatomically speaking, it ought to be the case. On the same page, in the woodcut representing the hernia region, an irregular obturator artery is drawn, but it is not mentioned among the explanations given below.

On page 201, the internal sphincter is described as "a pale ring of involuntary muscular fibres." We presume a ring of pale muscular fibres was meant.

The woodcut representing the visceral branches of the sacral plexus (page 231) does not help to elucidate this very intricate subject. The drawing has to be carefully examined before the whereabouts can be discovered. We think it would have added much to the value of the Atlas to have given a coloured drawing of this region, which is important and interesting both to the anatomist and the surgeon.

The drawings which represent the colotomy region (fig. 2, plate 25, and figs. 1, 2, 3, 4, plate 26) will be found of great value, and place the surgeon thoroughly *au courant* with the anatomy of the colon as concerned in this operation, though the author's description (page 241) of the position of this gut is not quite so clear as it might have been. He says: "The intestine occupies a line almost corresponding to one drawn vertically upwards from a point midway between the anterior and posterior iliac spines, but more accurately to one-half an inch further back." This is both long and laboured.

Part VIII. contains some drawings of the thorax and its contents, as dissected and seen from behind: these are novel and useful. Mr. Godlee, in describing the mediastina, has adopted Dr. Struthers' description. It is hardly wise to do so, for this nomenclature has not yet been naturalised, and students at the College might be unpleasantly reminded of the fact, especially if they are found mixing up the two methods into one. We confess to a liking of the old method, as given in Gray or Quain. It is just as correct as any other. One obvious disadvantage of the plan proposed by Struthers is that parts have to be enumerated twice. It is quite true that the parts are not arranged in any distinct layers, and that the lateral boundaries pass from sternum to spine without interruption. Still, the parts run from above downwards, and can most easily be described as anterior, middle, and posterior.

Parts IX. and X. contain an excellent series of drawings of the lower extremity. They are among the most successful of the whole series.

Part XI. commences the upper extremity, which will be concluded in the present and last part.

There are one or two clerical errors. Thus, Luschka has been spelt without the *c* (page 140), and Czermak without the *r* (page 141).

On the whole, we must express our great satisfaction with the work. It will doubtless become as popular as any of its predecessors, and will possess over them the advantage of having been executed by one who is an anatomist as well as a surgeon.

Tracheotomy in Laryngeal Diphtheria (Membranous Croup): with Especial Reference to After-treatment; to which are added a few General Remarks on Diphtheria and its Earlier Treatment. By Robert William Parker. London: David Bogue. 1880.

The objects of this little book, as stated by the author, are to advocate the utility and importance of local treatment in cases of laryngeal diphtheria, and to give, for the use of house-surgeons and practitioners, short but detailed instructions as to how this may practically be accomplished. After a few remarks on the history of tracheotomy, and on the best time for operating, the author goes on to consider the pathology and course of laryngeal diphtheria. He, as is already well known, regards croup and diphtheria as etiologically identical. The disease spreads by the contagion of its own secretion, and in consequence of the absorption of this product the system becomes gradually invaded. Membranous laryngitis may begin in one of two ways: it may attack the larynx primarily (croup), or it may affect it secondarily (diphtheritic croup). The author agrees with most writers in urging the performance of tracheotomy as soon as obstruction to respiration is evident. After opening the trachea, all the membrane must be carefully removed, not only because it offers a mechanical hindrance to respiration, but also because it is infectious to adjoining and contiguous structures. An improvement in the shape of the canula is suggested with a view of diminishing the risk of ulceration of the anterior wall of the trachea. These tubes are angular, instead of being a quarter circle.

In the after-treatment he urges special attention to the employment of steam containing disinfectants, and to the local application of soda and potash solutions to liquefy the membranous exudations.

Some points of importance as to the removal of the tube and as to the complications which may arise, and a summary of the cases observed by the author, conclude this interesting and instructive little work.

The book is well written, and though it contains little that is new, it brings into prominence points which are not always attended to, but which are of great moment in the successful treatment of these cases. The following dictum, to which we must take exception, occurs in the preface:— "The presence of membrane in the trachea in a fatal case of membranous laryngitis, after tracheotomy, must be regarded as evidence of the want of due care on the part of the surgeon in charge, just as much as would the presence of a piece of gut in the inguinal canal after herniotomy, or a calculus in the bladder after the operation of lithotomy." While this successful exclusion of false membrane occurred in the cases (twenty-one in number) observed by the author, we think that his experience is much too limited to warrant such a strong expression of opinion, and one which might subject a thoroughly competent surgeon to unpleasant and unjust reflections in cases where the occasionally unavoidable extension of the false membrane downwards had taken place.

A Manual of Psychological Medicine. By John Charles Bucknill, M.D., F.R.S., and Daniel Hack Tuke, M.D., F.R.C.P. Fourth edition. London: J. and A. Churchill. 1879.

We cordially welcome another edition of this valuable treatise. The plan upon which this edition is constructed differs little from that previously followed by the authors; but much valuable matter has been incorporated in the text, and the whole subject has been carried down to the latest date. One of the subjects to which increased attention has been given is that of cretinism, which presents points of the greatest interest, and in certain parts of the world involves questions of the highest importance. Considerable progress has been made in our knowledge of this strange condition within the last few years, and Dr. Hack Tuke has himself been instrumental in bringing about a change in this respect by studying the subject first in Switzerland, and more recently in the Pyrenees. Ten years have not yet elapsed since it was pointed out by Dr. Fagge that a form of cretinism existed in England, a few cases of which had already been recorded under other names; and since his paper many such cases have been put on record in England and other countries where their presence had not been suspected, the most remarkable instance with which we are acquainted being the occurrence of cretinism in three brothers who came under the notice of Dr. Hammond, of New York. The connexion between cretinism and an abnormal condition of the thyroid gland has long been recognised; but we believe it is only within the last few years that the absence of the thyroid body in certain of these cases has been noted, the association more generally known being that of cretinism with a form of goître. In the sporadic English cases, if we mistake not, absence of the thyroid body is the rule, whereas in the cases in mountainous districts it is much more general to find cretinism associated with goître. It appears to us that this point is one of considerable importance, and that it is one which requires rather more attention than has hitherto been given to it. We shall be glad if, in the

next edition of the work, Dr. Tuke can supplement his very interesting account of cretinism by information bearing upon this question.

Another subject, concerning which we observe considerable additions in the present edition of the work, is that of moral insanity. This is, perhaps, from the practical point of view, the most important branch of psychological medicine, and it is at the same time one of the most difficult to deal with. There can be but little doubt that, in a large number of instances, crime is simply a manifestation of disease, and that a very considerable proportion of the prisoners in our gaols are really the victims of a form of insanity. This is one of those facts, however, which it is almost impossible to bring home to the minds of those who have had little or no scientific training, and hence the great difficulty in obtaining any recognition of the existence of this condition in the courts of law. We are far from asserting that the prison is the wrong place for all of these patients; on the contrary, we believe that for a certain number among them the severity of a prison is, even from the point of view of medical treatment, more efficacious than the comparative comfort of a lunatic asylum. But, on the other hand, there are a considerable number for whom the prison is the worst sort of treatment; and therefore we believe that nothing but harm can result from the complete ignorance which at present exists on the subject in legal circles. Lawyers are trained upon the time-worn tradition that if a man is sufficiently sensible to know the difference between right and wrong, he must be held responsible for his actions; and the law on this point is constantly laid down to juries by judges in a way that shows how firm a hold this dictum still has upon the legal mind. On this point the medical and the legal professions are constantly coming into collision, and they will do so more and more if the legal position be not very considerably modified. Another form of insanity which is frequently ignored in courts of law is the transitory insanity taking the form of automatic action following upon or replacing epileptic fits. Our knowledge of the conditions met with under these circumstances has improved very considerably of late years, thanks to the observations of Hughlings-Jackson and others. In the present edition of their work the authors have treated this subject much more fully than in previous editions, embodying in their description all that is at present known of this very important branch of insanity.

In conclusion, we have only to say that the present edition maintains the high standard which the authors have set up for themselves, and that we know of no work on Psychological Medicine more likely to prove of practical utility as a book of reference for the medical practitioner.

The Mechanism of the Human Voice. By Emil Behnke. London: J. Curwen and Sons. 1880. Pp. 92.

The author of this work is Lecturer on Vocal Physiology at the Tonic Sol-fa College. He believes that "amongst all the many excellent works on the human voice there is not one which brings before the reader the whole subject from beginning to end," and this is the *raison d'être* of its appearance. It contains a *resumé* of the most reliable literature on the subject, and authorities are quoted almost *ad nauseam*. In days when a scientific education is considered an essential, it would be ungracious to say that such a work as this, however great its merits, will not probably much advance either the art or the practice of singing. For we should scarcely care to accept the doctrine which our author implies, that want of a scientific knowledge of the structure and function of the larynx is to be credited with the scarcity of good vocalists, or to be held responsible for the early deterioration of the voices of those who may accidentally possess them. "Artists are born, and not made," and it is probable that those who rise to the highest rank will owe their position to nature much more than to art.

In saying this, we do not wish to discourage the study of the human "voice-box," or any other study. For, although it will not profit the exceptional few, study no doubt will tend to improve the multitude, and will help many to an amount of success which without it would probably never be secured.

The little book is freely illustrated, and thus a difficult subject is rendered comparatively easy.

GENERAL CORRESPONDENCE.

THE EXAMINATIONS AT THE COLLEGE OF SURGEONS.

[To the Editor of the Medical Times and Gazette.]

Sir,—"By the present rules and regulations"—as you remind your readers—"all students are required to attend certain classes." There are very few members of the College now living who began their education and passed their examination before the time when the attendance was required on certain classes and lectures, and practice at a hospital. Why should it still be required? The College of Surgeons is an examining board, rather than an academical body; and it ought to be sufficient, in a candidate presenting himself at the College for examination, that he brings to the Court of Examiners the required amount of professional knowledge and surgical handicraft, without reference to the sources from which he derives it. I am, &c.,

C. S.

PARACENTESIS THORACIS MODIFIED.

Letter from Dr. R. Neale.

[To the Editor of the Medical Times and Gazette.]

Sir,—In my younger days I heard of one who cut a small hole in his fowl-house door for the chickens, and a large one for the hens. At page 554 of your journal this anecdote is recalled to my memory, for there is detailed a very interesting case of paracentesis, where a large trocar was inserted at the ninth interspace to let out the empyemic fluid, while a small aspirator-needle was introduced in the fifth interspace (with the effect of wounding the lung) in order to admit carbolised air. Surely it would have been better to have passed the finer needle, or trocar, through the larger, and thus have avoided two wounds!

Richard Neale, M.D. Lond.

60, Boundary-road, South Hampstead, N.W.

ABNORMALLY HIGH TEMPERATURES.

Letter from Dr. S. Mackenzie.

[To the Editor of the Medical Times and Gazette.]

Sir,—May I, through your columns, suggest to Dr. James Little that, in the case of hyperpyrexia under his care in the Adelaide Hospital, Dublin—to which you have alluded on several occasions—the observations of the temperature should *on all occasions be taken simultaneously with two or more thermometers.*

I have at the present time a patient, a woman, under my care in the London Hospital, in whose axilla the thermometer has recorded a temperature of 120·8° Fahr., without the patient presenting any symptoms corresponding to such an elevated temperature. I am awaiting some further observations with two thermometers, used simultaneously, before bringing the case and my explanation of the occurrence of such paradoxical temperatures before the profession.

I am, &c., Stephen Mackenzie, M.D.

26, Finsbury-square, E.C., May 31.

CÆSARIAN SECTION.

Letter from Dr. T. Radford.

[To the Editor of the Medical Times and Gazette.]

Sir,—I shall be particularly obliged if you will kindly allow me, through the medium of your very valuable journal, to ask the favour of any of your readers to oblige me by sending me any case of Cæsarian section which has been performed in Great Britain or Ireland, but which has not been published.

I am engaged in preparing a second edition of my "Observations," which I intend shall contain a complete historical record of all cases of this capital operation which have been performed up to the present time in the before-named countries. I am, &c.,

Manchester, May 31. Thomas Radford.

THE PURITY OF SALICYLIC ACID.

LETTER FROM MR. E. M. HOLMES.

[To the Editor of the Medical Times and Gazette.]

SIR,—At the present time, when the value of salicylic acid and the salicylates are being called in question, it seems desirable in the interests of medical science to call attention to the fact that salicylic acid is by no means a uniform product, and that it is therefore very desirable that the kind of acid used in medical experiments should be recorded.

The pure or "natural" salicylic acid obtained from oil of wintergreen is by far the purest acid. That prepared from carbolic acid, on the other hand, is very liable to impurity; and it is only just that, before salicylic acid is condemned, it should be ascertained whether its failure as a remedial agent be due to impurity or not. Mr. J. Williams, in a paper published two years ago (*Pharmaceutical Journal*, April 6, 1880, page 785), makes the following statements:—"The ordinary carbolic acid being a mixture of that acid and cresylic acid, and probably other bodies, it is quite natural that the salicylic acid produced from such a mixture should vary much in quality. There is another source of impurity in the difficulty of perfectly purifying the salicylic acid from the last traces of what I may call carbolic residue.(a) It is true the acid may have no perceptible smell of carbolic acid, but I have been given to understand that, when given internally, frequently great pain and irritation in the stomach are produced, which is not the case when a perfectly pure acid is administered." After showing that the crystals of the natural and artificial acids differ in character, he further remarks, on page 786, *l. c.*, "Experiments now in progress are sufficiently advanced to allow me to clear up the difficulty, and to prove that *the artificial acid as supplied in commerce is really made up of two bodies having different properties.*"

The latter of these two acids he proposed to name cresyl-salicylic acid. I have since learned that it is a more costly process to separate the pure "natural" salicylic acid from the commercial product obtained from carbolic acid than to prepare it direct from the oil of wintergreen, and that the German salicylic acid derived from carbolic acid is the kind generally used. For the guidance of those who desire to use the pure natural acid, I may add that it occurs in well-defined *needle-like crystals*, resembling in appearance those of strychnia, but much larger; whereas that prepared from carbolic acid has a powdery appearance, more like quinine. The salicylate of sodium prepared from the pure "natural" acid is in the form of *large pearly plates*, which is not the case with the salicylate of sodium prepared from "artificial" salicylic acid. Until the physiological action of the "cresyl-salicylic acid" has been investigated, and the "natural" or "artificial" character of the salicylic acid and salicylates used in the experiments (an account of which has been published recently in various medical journals) is known, may not the conclusions arrived at be considered somewhat doubtful?

Specimens of the natural and artificial salicylic acid and salicylate of sodium, presented by Mr. Williams, are in the museum of the Pharmaceutical Society, and can be seen by anyone desirous of obtaining ocular demonstration of the above facts.

I am, &c.,

May 31. E. M. HOLMES.

BLUE SPOTS.—What next?—*perhaps the parasite itself!* Dr. Duguet, of the St. Antoine Hospital, in a clinical lecture stated that these spots, which for a long time were supposed to be peculiar to mild cases of typhoid fever, are really found in a variety of affections. He himself had so frequently observed them in young men affected with venereal affections, especially gonorrhœa, that for some time he believed them peculiar to these. They are, however, due, as first shown by M. Mourson, to the presence of pediculi pubis, and can be artificially produced by inoculating with the crushed bodies of these insects. He concludes—(1) that the blue spots are met with in a great number of quite different diseases, as well as in healthy persons; (2) that they are solely dependent upon the presence, passage, and action of the *phthirius inguinalis*; and (3) that they are of no clinical signification whatever.—*Gaz. des Hop.*, April 20.

(a) See *Pharmaceutical Journal* (3), vol. vii., page 654.

REPORTS OF SOCIETIES.

THE PATHOLOGICAL SOCIETY.

TUESDAY, MAY 18.

JONATHAN HUTCHINSON, F.R.C.S., President, in the Chair.

REPORTS OF THE MORBID GROWTHS COMMITTEE.

THE following reports of the Morbid Growths Committee were read:—

1. The report on Dr. Coupland's specimen of Primary Sarcoma of the Liver stated that the Committee had found the growth to be of a carcinomatous nature, with concurrent increase of the connective-tissue elements.

2. Mr. Eve's specimens of Syphilitic Disease of the Bones of a Fœtus the Committee found to present the appearances described by Mr. Eve, but they were of opinion that there was but scant evidence that the fœtus was really syphilitic.

3. Mr. Morris's specimen of Pulsating Tumour of the Cranium was found to resemble neither sarcoma nor enchondroma. Its structure was very similar to that normally seen in the thyroid body. Virchow and Cohnheim had described cases of thyroid disease with secondary growths resembling thyroid structure in other parts of the body; and in Mr. Morris's case the thyroid body was enlarged.

4. Mr. Nunn's specimen of Tumour of the Breast was found to present the characters of an unusual form of cancer that had been described by Cornil and Ranvier.

SPECIMENS ILLUSTRATING THE DEVELOPMENT OF CANCER.

Dr. THIN exhibited two series of microscopical preparations of cancerous growths. The group was from a liver in which cancerous growths had been developed secondarily to cancer of the breast. These cancerous growths were found to consist of rounded columns of small epithelial cells of a spherical or polygonal shape. The liver-cells showed no tendency to become transformed into cancer-cells, as has been supposed to take place, but in the neighbourhood of the cancerous growths they presented retrogressive changes. Thus the liver-cells at some distance were normal, those somewhat nearer the cancer growth were bile-stained, while those in immediate proximity showed fatty degeneration, and finally broke down, the nucleus remaining entire to the last and showing no signs of division. Moreover, double-staining with eosin and logwood brought out the different elective qualities of the cancer-cells and the liver-cells directly contiguous. The other series of microscopical preparations were from a cancerous tumour of the breast belonging to the class to which Dr. Thin, in a paper recently read before the Medico-Chirurgical Society, had given the name "duct-cancer." The tumour was removed from the breast of a woman, aged twenty-eight, the mother of five children. In three years it had grown from the size of a hazel-nut to that of a small orange, and a second (smaller) tumour had developed in the same breast. The axillary glands were enlarged. The clinical characters of these "duct-cancers" were such as to lead surgeons to regard them as examples of scirrhus, while their structure was quite different. The secreting epithelium of the acini in a lobule first broke down, and the surrounding parts were infiltrated with small cells, until at length the epithelium was replaced by cylindrical columns of cells. These columns increased in diameter, and formed by their coalescence large spherical masses of cells, the subsequent degeneration of which resulted in amorphous masses, which had been erroneously described as the products of altered blood. In the lobular areas, in which the cell-growth had produced only small columns, with a central lumen persisting in places, the appearances were similar to those described as characteristic of adenoma or chronic tumour of the breast. Dr. Thin thought that surgeons would eventually be able to diagnose between these "duct-cancers" and scirrhus during the life of the patient.

Mr. R. W. PARKER would have regarded the tumour in Dr. Thin's second case not as a carcinoma, but as an adenoma or simple hypertrophy of the gland structure. The patient's age, and the fact that the connective tissue was not invaded by the epithelial growth, favoured this view. Moreover, he could not understand why cancer beginning in the galactophorous ducts should differ from cancer beginning in the

acini of the gland, the difference in the epithelial cells of the two parts being only such as was explained by the difference in the mechanical influences to which they were exposed.

Mr. H. Morris thought that Dr. Thin had confused two kinds of cases, viz., those which began as tumours in the breast but went on to secondary invasion of the nipple, and those in which eczema of the nipple preceded the formation of a tumour in the breast. After a tumour had once begun in the last-mentioned manner, its course was very similar to those of the first form, and a diagnosis between them was of little consequence. Cases of the second kind were very rare.

Dr. Pye-Smith remarked, in reference to Mr. Parker's observations, that Schiff and Creighton had disproved the old belief that the epithelium of the acini was identical in origin with that of the ducts. These observers maintained that the latter grew from the epiblast and the former from the mesoblast.

Mr. Cripps agreed with Mr. Parker in regarding Dr. Thin's second tumour as an adenoma. He asked whether the axillary glands had been affected and whether there had been any recurrence of the tumour.

Dr. Thin stated, in reply, that the operation had been performed on March 13, and that the axillary glands were removed at the same time. Up to the present time there had been no recurrence of the growth. He was quite aware that such tumours were regarded as adenomata by surgeons; but he doubted the occurrence of real adenoma. If the epithelial growth were circumscribed, it was called an adenoma; if it spread and infiltrated the surrounding tissues, it was called a scirrhus. The difference between non-malignancy and malignancy of these tumours depended on the resistance or non-resistance of the fibrous tissue of the gland to the advance of the cell-growth. In reply to Mr. Morris he stated that he regarded this kind of case as quite different from those that started with disease of the nipple.

Subcutaneous Painful Tumour.

Dr. Hoggan showed microscopical specimens and drawings, illustrating the pathology of this affection, which was usually classed among the neuromata. He believed it to be, however, a typical adenoma of the sweat-gland, the painful symptoms being due to impaction of the hard nodule upon the nerve-bundles lying immediately beneath it. Axmann described bodies like Pacinian corpuscles in these tumours, this appearance being, however, due to the organisation of blood-clots. The cells within these clots took on the form of the other cellular elements of the tumour, which exactly resembled the epithelium lining the sweat-gland tubules; and ultimately dense masses of such cells occupied the position of the blood-clot, and obscured the tubular structure of the rest of the tumour.

Recurrent Mammary Tumour.

Mr. Gay showed a tumour which he had recently removed from the breast of a woman about thirty-four years old, being the sixth of the same kind he had removed from this patient since 1865. The tumour was a spindle-celled sarcoma. Before the last removal, a secondary growth had appeared near it, growing very rapidly. This secondary growth proved to be a myxomatous tumour. Notwithstanding the recurrence of these tumours, the patient had become strong and stout. He had reported the case to the Society in 1865 when the first operation was done.

The President remarked upon the importance of having the sequel of cases thus brought before the Society.

Aneurism of the Aorta opening into the Right Auricle.

Dr. N. Moore exhibited this specimen. There had been no symptoms during life, notwithstanding that the opening had evidently existed for a long time.

Cirrhosis of the Liver in a Child.

Dr. F. Taylor showed the liver of a child aged eight years, which presented all the characters of ordinary cirrhosis. It weighed twenty-five ounces. The patient had begun to show signs of liver-disease three years and a half before death, having at that time suffered from jaundice, vomiting, and diarrhœa. From that date it was subject to occasional attacks of jaundice and ascites. The liver was at first large, but gradually diminished in size. There was an indirect history of the child having had gin to drink.

Dermoid Tumour from the Rectum.

Dr. Port showed a tumour that he had removed from the rectum of a girl, aged sixteen, at the German Hospital. It was mainly composed of fibrous tissue, enclosed in an integument like ordinary skin, which was covered with long hair, and contained abundant involuntary fibre like that seen in the healthy cutis; growing upon it also was a well-developed canine tooth. A somewhat similar case had been recently reported in Langenbeck's *Archives*, where a tumour was removed containing a tooth and brain-substance.

Cystic Oxide Calculus.

Mr. Shattock showed a calculus chiefly composed of cystic oxide, with a thin layer of oxalate of lime below the surface. It had been removed from a man aged nineteen.

Aneurism of the Abdominal Aorta opening into the Vena Cava.

Dr. Pye-Smith showed a specimen taken from the body of a young man who had been ill for eight weeks, suffering from orthopnœa, pallor, and general dropsy. There was a loud systolic bruit down the whole length of the vertebral column. He died of gangrene of the right leg following on the use of Southey's trocars to relieve the intense œdema. The aneurism was situated close to the bifurcation of the aorta, and opened into the vena cava at its bifurcation.

Scleroderma Adultorum.

Dr. Duckworth exhibited a female patient, aged twenty-four, who presented well-marked scleroderma of the arms from the elbows downwards, and of the legs from the knees downwards, the left thigh being also partially involved. The disease in the arms assumed the diffused form, whilst in the legs it was partially diffused and partially circumscribed, presenting in these latter parts the characteristics of morphœa. The commencement of the disease dated from eight years previously, the circumscribed patches in the legs having been the first to appear. During its course she had suffered from two attacks of subacute rheumatism. The case was specially interesting as exhibiting in the same subject both the diffuse and the circumscribed forms of the disease.

Cystic Degeneration of the Kidneys.

Mr. Eve showed the kidneys of a man who died of uræmia in St. Bartholomew's Hospital. He had presented no symptoms until a short time before his death, when he suffered from extreme dyspnœa, his urine containing two-thirds of albumen. Post-mortem, the kidneys were found in an extremely advanced stated of cystic degeneration. Section showed the tubules to be greatly dilated, tortuous, and for the most part denuded of epithelium; the Malpighian corpuscles were not dilated.

The President remarked that the case resembled one exhibited by himself, where a sailor who had presented no signs of renal disease died of uræmia after a compound fracture of the leg; both the kidneys being found to be in an advanced state of cystic degeneration.

Congenital Syphilitic Ulceration of the Tongue.

Dr. Barlow narrated the case of a girl, aged six, whom he had exhibited at a previous meeting, and who presented a gumma of the tongue, with adjacent ulceration. He believed this condition had not hitherto been described in connexion with congenital syphilis.

The President remarked that, althongh it may not have been described, he was quite familiar with this condition, and had seen several cases of congenital syphilis where it had been present.

Primary Sarcomatous Growths in both Kidneys.

Dr. Abercrombie showed the kidneys of a child, aged four, containing a deep purple growth, which, on microscopic examination, proved to be a small round-celled sarcoma. He had seen two similar cases. In all three children the spleen was enlarged; in none of them was there any history of congenital syphilis or of malaria, nor were there any symptoms of ordinary renal disease.

Dr. Payne asked whether the growth might not be lymphomatous. The drawings handed round by Dr. Abercrombie resembled this form of growth, and the enlarged spleen pointed to it?

Dr. Abercrombie replied that the spleen, though enlarged, was found to be normal in structure in each case. The specimens were referred to the Morbid Growths Committee for further examination.

Congenital Malformation of Heart.

Dr. Stephen Mackenzie showed drawings of two cases of this nature. In the first case, taken from a child aged two years and a half, there was stenosis of the pulmonary artery, and a supernumerary right ventricle, the infundibulum being partially shut off from the real ventricle. The left superior vena cava was pervious, and thus the systemic veins opened into the left auricle. In the second case there were three ventricles with imperfect septa between them. The extreme right ventricle gave origin to a superior aorta to supply the head and arms. It was also continued into the pulmonary artery through the ductus arteriosus, below which vessel the pulmonary artery formed the descending aorta.

Alveolar Sarcoma of the Face.

Mr. McCarthy showed microscopical preparations and drawings of a tumour he had removed by the thermo-cautery from below the lower eyelid of an old man. The tumour had begun in a wart; there was no glandular affection and scarcely any pain. The growth proved to be an alveolar sarcoma degenerating in the centre.

Dr. Thin remarked that the microscopical sections bore a close resemblance to those of rodent ulcer.

The President said that clinically the case was very widely distinguished from rodent ulcer. The growth was firm, pedunculated, had increased rapidly, and had not ulcerated.

The following specimens were exhibited by card :—

1. By the President—(1) Four drawings of unusual forms of Rodent Ulcer and Epithelioma of the Face; (2) Drawing of Indurated Chancre of the Tongue.
2. By Mr. Walsham—Persistent Left Vena Cava.
3. By Mr. Nettleship—(1) Spontaneous Intra-ocular Hæmorrhage in an Infant; (2) Eyeball degenerated and containing much Cholestearin.
4. By Mr. McMahon—(1) Cancer surrounding the Colon; (2) Double Kidney; (3) Strangulated Funis.
5. By Dr. Ralfe—(1) Branched Calculus of Calcic Phosphate in the Pelvis of a Kidney; (2) Acute Fatty Changes occurring in Enlarged Liver (Acute Hepatitis).

This was the last meeting of the session. The President reminded the members that the special discussion on Rickets would begin at an early meeting of next session.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, May 25.

John E. Erichsen, F.R.C.S., F.R.S., President, in the Chair.

On the Treatment of Lateral Curvature of the Spine.

Mr. W. Adams read a paper on the treatment of lateral curvature of the spine by steel supports, plaster-of-Paris jacket, and the poroplastic jacket. The author commenced by alluding to the great change in the treatment of curvatures of the spine, both angular and lateral, during the last three years, in consequence of the method introduced by Professor Sayre, of New York, *i.e.*, the application of the principle of extension by suspending the patient from the head and arms, and then applying a plaster-of-Paris jacket during suspension. The author did not propose to speak of angular curvature from Pott's disease, further than to say that it was in this class of cases that the advantages of the plaster-of-Paris jacket were most conspicuous; and his experience led him to confirm all that Professor Sayre had claimed for it; but in the treatment of lateral cnrvature, Mr. Adams differed from Dr. Sayre, and believed the plaster-of-Paris jacket to be as useless and injurious in this class of cases as it was useful in cases of angular curvature. For practical purposes, the author arranged cases of lateral curvature in three classes, viz., 1. Physiological curves; 2. Confirmed structural curvcs; 3. Commencing structural curves. In forming a diagnosis between these three classes, the importance of the stooping position as affording evidence of the existence of rotation of the bodies of the vertebræ was particularly insisted upon, attention being directed to the symmetrical relations or otherwise of the angles of the ribs in the dorsal region, and of the transverse processes in the lumbar region, rather than to the spinous processes, the apices of which might preserve their normally straight line in relation to one another without any lateral deviation, whilst rotation of the bodies of the vertebræ might have taken place to a considerable extent, rendering the case incurable. This fact was illustrated by a specimen exhibited to the Society by Mr. Adams, and described in a paper published with illustrations in vol. xxxvii. of the *Transactions* of the Society. In the cases of commencing structural curve, in which probably the intervertebral cartilages only had suffered from unequal compression, arranged in the third class, and forming an intermediate group between the first and second classes, the spinal curvature was much more apparent in the standing than in the stooping position; although, in the stooping position, it did not completely disappear, as in the physiological curves. Some evidence of commencing rotation was afforded by a slight posterior projection of the angles of the ribs on one side, and depression on the other; and a similar deviation as regards the transverse processes in the lumbar region, when the patient was examined in the stooping position. With regard to treatment of cases in the first class, or physiological curves, no mechanical treatment by any form of spinal support should be given, but reliance should be placed entirely upon physiological means, such as gymnastic exercises, partial recumbency, and attention to the general health. In some cases an elastic brace attached to stays might be used. In the second class of confirmed structural curves mechanical support of some kind must be resorted to, and continued during the period of growth, in the hope of preventing increase and of obtaining some improvement in the curvature; but confirmed lateral curvature, whether slight or severe, with its adapted series of structural changes, was essentially incurable. The most efficient retentive spinal support was an instrument made with a pelvic belt and spring plates attached to vertical bars at the back, without any mechanism requiring alteration by the surgeon. In some favourable cases for improvement, the stronger spinal instrument, with steel plates attached to levers, and adjusted by rack-and-pinion movements, might be used with advantage. Sayre's plaster-of-Paris jacket had been largely employed in these cases; but from what the author had observed in the practice of others, he condemned its application on the grounds that it failed as a curative agent, the gain in height by extension being quickly lost; that it weakened the spinal muscles by its constant use, and hindered gymnastic exercises; that it restrained respiratory movements, and prevented active exercise; and that it was an unnecessary restraint at night, and interfered with bathing and cleanliness. The poroplastic jacket, which, when softened by steam, was applied in the same way as the plaster-of-Paris jacket during suspension, was free from the disadvantages of the latter, as it could be removed at night, or at any time for the purpose of gymnastic exercises, etc. It acted as an efficient and light retentive support in many cases of incurable curvature. Commencing structural curves formed the only curable cases of lateral curvature; and for these the author recommended a combination of mechanical support, gymnastic exercises, and partial recumbency. By this combination of physiological and mechanical means the further progress of curvature would be arrested, and the best opportunity afforded for recovery from such slight structural damage as might have already occurred.

Mr. Bryant said that Mr. Adams's observations were consonant with what was felt by most surgeons. On one point, however, there might be difference of opinion, viz., as to the time when curvature ceased to be curable by physiological means, and passed into the incurable stage, requiring artificial supports. He would delay assuming the commencement of the incurable stage as long as possible. In many cases of lateral curvature, recovery took place in a remarkable degree. He approved of the means of diagnosis recommended by Mr. Adams. He had been accustomed to examine the patients in the stooping position, with their hands on the back of a chair. He agreed that the plaster-of-Paris jacket was not fitted for lateral curvature; though in some rare instances, of which he had seen one, it was the only thing that would support the patients. He would even discard the iron apparatus. The poroplastic jacket was preferable to any other; and the addition of steel bars to it, as recommended by Mr. Adams, was no doubt an advantage.

Mr. Warrington Haward was glad to hear Mr. Adams say that many cases of lateral curvatnre did not need any apparatus. He thought that the prejudice of the public was rather in favour of artificial supports than against them. He

agreed with the opinion that the application of supports should be delayed as long as possible. All spinal supports were necessary evils, for they interfered with respiration. In cases where the curvature was apparently only an indication of general debility, he would depend more on recumbency and exercise, both being judiciously regulated by the surgeon, and the general health being at the same time attended to, than on artificial supports. In such cases, the application of the plaster jacket tended only to still more weaken the spinal muscles. When the disease had become incurable, the object was to prevent it from becoming worse; and he would here use the poroplastic jacket, which could be fitted to every part of the body.

Mr. E. Owen said that it was difficult to draw a distinction between the three classes; and this was much more difficult for "surgical mechanicians," into whose hands many cases of spinal curvature came, and whose tendency was to apply artificial supports in all cases, even in hysterical spinal curvature. He wished to speak with all respect of the surgical mechanicians; but he had met with cases in which the supports applied had been worse than useless.

Mr. Adams replied.

A Case of Epithelioma of the Neck following a Patch of Chronic Skin-Disease.

Mr. Henry Morris related a case of epithelioma of the neck following a patch of chronic skin-disease, in which the cancer was twice excised, and the external and internal jugulars of the same side were ligatured. Eliza H., aged sixty, had for years a small circular red and scaly patch on the right side of the neck, which remained in much the same condition, shedding fine scales occasionally, for five years. At the end or this time, and about four years before admission into the Middlesex Hospital, the surface of the patch was knocked off by the elbow of a child; then followed a scab, and the gradual extension of the underlying sore. Subsequently, under a course of treatment by "burning plasters," the sore spread more rapidly, until it reached the size of half the palm of a man's hand, having raised, everted, and hardened edges, and a yellow-grey, and in places sloughing, base. It was situated in the central and upper part of the right posterior triangle. She had also a large bilateral solid bronchocele, which on both sides displaced the large cervical vessels outwards. On September 20, 1876, the growth was excised and the external jugular vein was ligatured. The microscopical examination of the ulcer proved it to be an ordinary epithelial cancer. The patient made a good recovery, and remained well until January, 1878, when the growth recurred. On March 21, 1878, this was excised; and during the operation the internal jugular vein, which was largely involved in the disease, was wounded. A silk ligature was applied to the vein above, and another below, the wound. Chloride of zinc paste was required in the after-treatment to be applied to one or two points where the disease showed a tendency to recur; but ultimately a good recovery was made. The patient left the hospital on May 23, 1878, and remained well to April, 1880. The case afforded another illustration (although a somewhat different one from ichthyosis of the tongue and eczema of the nipple) of cancer excited by long-standing irritation of epithelial surfaces, and spreading from those surfaces to the tissues beyond; it also pointed to the truth of Sir James Paget's suggestion, "That a superficial disease induces in the structures beneath, in the course of many months, such degeneracy as makes them apt to become the seats of cancer"; and, further, it gave support to the local hypothesis of the origin of cancer. Reported cases justified the conclusion that the simultaneous ligation of the common carotid artery and the internal jugular vein, contrary to the opinion of Langenbeck, was at least four times as likely to excite brain mischief as ligation of the internal jugular alone, and that in no case in which the ligature had been completely applied to the vein had either apoplexy, softening of the brain, or other cerebral disorders ensued. While incised and punctured wounds of the internal jugular, if not treated by the ligature, were almost invariably fatal, yet the chances of a good recovery after the complete ligation of this vein were very considerable, provided the carotid artery was not interfered with, and that neither extreme hæmorrhage nor the aspiration of air into the vein had occurred before the application of the ligature. The mortality of cases hitherto reported was not more than 10 per cent. when the vein alone was ligatured; but if the carotid were ligatured at the same time as the vein, the chances of recovery or death were about equal, *i.e.*, the mortality was about 50 per cent., or 7 per cent. higher than the mortality after ligature of the common carotid alone.

The President had seen a case of ligature of the internal jugular vein, in which no cerebral or other symptoms were the result.

Mr. Holmes had an imperfect recollection of a case of ligature of the vein during the removal of a tumour. No cerebral symptoms followed, but the patient died in consequence of previous weakness and shock. He thought that, in Mr. Morris's case, there was probably obliteration of the vein by the tumour at some point. He agreed in disapproving of the ligature of the carotid artery with the jugular vein.

Mr. R. W. Parker had tied the internal jugular vein in a case of suicidal wound in the London Hospital. The patient recovered. He dissented from the theory of the connexion between eczema and cancer.

Mr. Bryant had met with two cases of ligature of the internal jugular vein during the removal of tumours, in which no symptoms followed.

Mr. Morris replied.

ASSOCIATION OF SURGEONS PRACTISING DENTAL SURGERY.

Wednesday, May 19th, 1880.

W. A. N. Cattlin, F.R.C.S., President, in the Chair.

Mr. W. Donald Napier brought before the Association two instruments of very considerable interest and importance, not only to the Fellows of the Society, but to the medical profession at large. The first instrument was one for the more perfect administration of nitrous-oxide gas, for by a very simple arrangement the possibility of the gas running short during an operation was entirely prevented. Instead of one wrought-iron bottle, containing the gas in a liquid state being used, two bottle are placed side by side in a light frame, and so connected to each other by an iron tube, that, in the event of one being emptied, gas can instantaneously be obtained from the other. The next instrument shown by Mr. Napier was the "Polyscope," and by its use the whole mouth can readily be illuminated by the electric light, without the slightest inconvenience or discomfort to the patient, and a most perfect cautery can be obtained when required for the destruction of sensitive dentine, nerves, etc. The perfection to which this instrument had been brought was due to M. E. Brasseur and M. Trouné, of Paris.

The President proposed a vote of thanks to Mr. Napier for bringing the two instruments before the notice of the Society; and then narrated the following case, which he considered one of great interest. The gentleman formerly lived in New South Wales, and about twenty-five years ago suffered from "sunstroke," was very profusely salivated, but recovered his health, married, and returned to this country. In a letter, dated September, 1872, describing his own suffering, he says: —"Five years ago I had a most severe attack of neuralgia in my head and face, which continued with more or less violence for about five months, coupled with intense nervous excitement. My then medical man tried alteratives in the form of calomel and colocynth in small doses, black draughts, and occasionally 'Dover's' and 'James's' powders. At the same time I had a carious bicuspid tooth which could not be extracted. After having for some time taken every means to alleviate the nervous pains at home, I tried change of air, and the pain was very much alleviated, but became chronic in its form. Having an idea that the drainage of the village was defective, I left the neighbourhood, and came here (near Horsham, in Sussex) in March, 1870. My health was excellent up to Christmas, 1871, when I had a sharp attack of what seemed to be suppressed bile. The medical man prescribed the same remedies that I have always taken (quantity in pill I cannot state), but two weeks afterwards I began to feel a metallic taste in my mouth, the gums became spongy, and my teeth loose in the upper jaw; pus formed rapidly, and culminated in an abscess on the right nostril, which was opened, but this afforded relief only for a short time, as matter and bony substance continued to be thrown off. I may add that for fifteen years I have led a steady life, with nothing to complain of excepting an occasional attack of dyspepsia. The rest you know, as I applied to you for your assistance." When I first

saw this patient a thick creamy discharge was passing from beneath the gums around the necks of the teeth in the upper jaw. The symptoms very much resembled a disease ably described in "Wood's Practice of Medicine" (an American work), and, as far as my experience goes, it is generally incurable. Perhaps it yields more readily to the application of the electric cautery, or chloride of zinc, than any other treatment. The discharge is characteristic, thicker, and different in colour to healthy pus; it oozes rather than flows from the alveolar process, and requires slight pressure to remove it from beneath the gums. This kind of discharge, coupled with some inflammation of the gums, continued for many weeks, accompanied by distressing pains and neuralgia, until necrosis of the alveolus took place, and healthy teeth with parts of their sockets were removed. Nearly all the teeth of the upper jaw were lost in this way, and the gums then became healthy. There was *no* history of syphilis; but the patient lived in neighbourhoods where either the drainage or water was not good, and seems to have been peculiarly susceptible to the poisonous action of mercury. To these combined causes the disease must be attributable. Since he was under my care he has suffered from paralysis of the right side and epileptic fits, from which he is now recovering.

Mr. Henry Long Jacob (Birkenhead) related the following unique case:—On March 21, 1868, he extracted from M. W. G., aged about thirty-five, the right upper wisdom tooth, which was carious, loose, and painful. On examination he found the sac of an old abscess round the tooth, and the substance of the thickened fungoid peri-odontal membrane was studded with globules of mercury of various sizes, from a diameter of one-twenty-fourth of an inch downwards, some being too small to be seen distinctly with the naked eye. The patient stated that the tooth, to his recollection, had never been filled, and that to the best of his knowledge he had never been subjected to a course of mercury.

The President then stated that as this was the last meeting of the present session, he sincerely hoped that rest and salutary change would bring increase of health and mental energy to all the Fellows. The session had not been unproductive; on the contrary, the character of the Association had been well maintained. Although it had been considered desirable to protest against some violent changes which had lately been introduced by the Dental Act, still the course taken was without ill-will towards those who differed in opinion from the members of the Association.

Society of Arts.—In connexion with the Conference on the Progress of Public Health, which, it is announced, will be held by the Society of Arts on the 10th and 11th inst., it is intended, as in former years, to hold an exhibition of sanitary appliances. These exhibitions, though on a small scale—the Society's premises not affording room for a large collection,—have been found very useful in former years, as the conferences have always been largely attended by sanitarians from different parts of the country.

Feeding by the Œsophageal Tube.—In a clinical lecture delivered at the Bellevue Hospital, Dr. Gray directed especial attention to the feeding of other patients than the insane by means of the œsophageal tube and the funnel. An ordinary flexible tube is introduced into the stomach, and a funnel adjusted to its outer extremity, which carries a metallic ferrule to keep it from "brooming." The tube is easily introduced by carrying it along the side of the mouth, around the tonsil, and so down, its introduction in this manner causing less inconvenience to the patient than when carried through the centre of the pharyngeal space. The tube and funnel are recommended in cases of facial paralysis, for example, following diphtheria, in cases of acute tonsillitis with difficult and painful deglutition, in cases of even severe inflammatory sore throat; in short, in any case in which the patient finds marked inconvenience from any cause in swallowing. The lecturer remarked that there was not only no excuse, but, on the other hand, a culpable neglect, in allowing patients to starve to death when the means could so easily be used for supplying them with food. The resistance to the introduction of the tube by closure of the jaws can be easily overcome by insinuating the end of a strong spoon-handle, or a piece of firm wood covered with cloth, between the teeth, and then turning it up edgewise, when the tube, being only five-eighths of an inch in diameter, can be readily introduced.—*New York Med. Record*, April 24.

OBITUARY.

S. MESSENGER BRADLEY, F.R.C.S. Eng.

We very much regret to have to record the death of Mr. Messenger Bradley, Surgeon to the Manchester Royal Infirmary, the news of which was received in Manchester with universal surprise and deep sorrow. Mr. Bradley was at work as usual up to Saturday, May 15, and had made all arrangements to take his customary holiday during Whitsun week; but on Saturday afternoon and Sunday, May 15 and 16, he complained of severe headache, and retired early to bed. The next day (Monday) he had distinct rheumatic pains in several joints, with acid perspiration, and the temperature in the evening was 102°. Next morning, however, he was better; the pains had almost gone, the temperature had fallen, and in the evening was normal. He felt so well on Wednesday that he got up a little; and recovered so thoroughly that on Friday morning he went to London, accompanied by Mrs. Bradley, *en route* for Ramsgate, where his two boys are at school. On arriving at Ramsgate the following morning he joined in a game of cricket with the boys, and in the afternoon went for a long walk. On Sunday he went to church, and again took a long walk. On Monday morning he complained of feeling slightly unwell; and symptoms of acute pleurisy rapidly developed, first on the right side, and subsequently on the left. The general symptoms were from the first of a severe character, the temperature commencing at 104°; the inflammation attacked the pericardium, and, in spite of the most unremitting attention, he died at one o'clock on Thursday, May 27, his sufferings during his short illness having been extremely severe.

Mr. Bradley was born June 2, 1841, and was therefore within a week of completing his thirty-ninth year. He received his professional education at the Manchester School of Medicine; became a Member of the Royal College of Surgeons of England in 1862, and in 1869 he gained the Fellowship of the College by examination. Soon after he qualified he was appointed on the resident staff of the Manchester Royal Infirmary as physician's assistant. Before commencing practice he made several voyages to New York, and subsequently went for a tour in the Mediterranean, and visited Constantinople, Egypt, and Syria. On his return home in 1865, he entered upon private practice, and was appointed Demonstrator of Anatomy at the School of Medicine, and shortly afterwards Lecturer on Anatomy, human and comparative. For several years he was Professor of Physiology at Stonyhurst College. In 1873 he was elected Assistant-Surgeon to the Manchester Royal Infirmary, and, on the death of Mr. Southam in 1876, he succeeded to the surgeoncy at the Infirmary, and was appointed lecturer on Practical Surgery at the Owens College School of Medicine.

A complete list of Mr. Bradley's contributions to medical and general literature would occupy more space than we find at our command, for his was the pen of a ready writer, and his genius was eminently versatile. Amongst his more important literary productions, however, we may make mention of his "Manual of Comparative Anatomy and Physiology," of which three editions have been published; his "Notes on Syphilis," reprinted from the *Manchester Medical and Surgical Reports*, of which he was for two years co-editor with his friend and colleague, Mr. Walter Whitehead; his "Lectures on Syphilis for the use of Students"; and his latest and most elaborate work, on the "Injuries and Diseases of the Lymphatic System," which appeared only last year, and was very favourably received. At the opening of the School of Medicine some years ago he delivered an eloquent introductory address, which was afterwards printed under the title of "Retrospect of the Advance of Modern Medicine." He was a frequent contributor to the medical journals, all his papers being characterised by a remarkable ease and raciness of style which made them exceedingly pleasant to read.

As a speaker, Mr. Bradley had few rivals—in his own profession, probably none. Naturally gifted with a ready flow of ideas and a keen sense of humour, he had acquired an admirable command of language, and many of the rarer graces of oratory, which combined to make him an attractive and brilliant lecturer, and an exceptionally valuable teacher. His impromptu speeches were not infrequently even more sparkling than many of his carefully prepared addresses.

His reading had extended over a wide and varied field, and as he had besides a wonderfully retentive memory, he was enabled to enrich his conversation with a succession of appropriate similes and apt quotations. Hence it was that his gifts showed to advantage quite as much in social intercourse as in the larger arena of the lecture-room. Brilliant qualities such as these necessarily made Mr. Bradley the attractive centre of a wide circle of friends and acquaintances. Yet no man was more utterly free from vanity and self-conceit. Admired and respected by all who knew him, he was beloved by everyone who had been admitted within the charmed circle of his intimate acquaintance, while with the students his popularity was unbounded. He was an exceptional man whom it is impossible to replace, and it will be long before his friends will be able to realise that they are never again to be charmed by his eloquence and stimulated by his enthusiasm. He was a man of whom Manchester and its School of Medicine were thoroughly and deservedly proud. C. J. C.

MEDICAL NEWS.

Royal College of Surgeons of England.—At the half-yearly Primary Examination in Anatomy and Physiology for the Fellowship of the College on the 27th ult., the following gentlemen were successful, viz.:—

Harris, D. P., student of the London Hospital.
Townsend, Stephen C., of St. Bartholomew's Hospital.
Voss, F. H. V., of the London Hospital.

Five candidates were rejected.

Apothecaries' Hall, London.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, May 27:—

Abbott, James Eastoe, Darlington.
Benham, Henry Arthur, Clifton, Bristol.
Beckett, Thomas George, Brick-lane, Spitalfields.
Benthall, Winfred, Sherborne, Dorset.
Furness, John, Hesketneedmarket, Cumberland.

The following gentlemen also on the same day passed their Primary Professional Examination:—

Dashwood, Edmund Samuel, Guy's Hospital.
Hodges, James, King's College.
Kilham, Charles Speight, Sheffield Infirmary.

APPOINTMENTS.

⁂ The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to all new Appointments that take place.

Smart, Andrew, M.D., F.R.C.P.—Assistant-Physician to the Royal Infirmary, Edinburgh.

BIRTHS.

Armitage.—On May 29, at Springfield-road, N.W., the wife of Joseph Armitage, M.R.C.S., of a daughter.

Hamilton.—On May 30, at 30, Northampton-park, N., the wife of Thomas Hamilton, M.B., F.R.C.S., of a son.

Norman.—On May 22, at Edde Cross House, Ross, the wife of J. W. Norman, M.B., F.R.C.S., of a daughter.

O'Brien.—On May 30, at Newport, Mon., the wife of Surgeon-Major T. M. O'Brien, A.M.D., of a daughter.

Thomson.—On May 24, at Westgate, Peterborough, the wife of William Thomson, M.D., F.R.C.S., of a son.

MARRIAGES.

Edmundson—Johnston.—On May 26, at Liverpool, the Rev. Alfred A. Edmundson, curate of Hurdsfield, to Mary, youngest daughter of John Johnston, M.R.C.S., of Liverpool.

Fraser—Austin.—On June 1, at Glastonbury, Somerset, Græme Bisdée Fraser, M.R.C.S., L.S.A., of Weston-super-Mare, to Fannie, youngest daughter of James Austin, Esq., of The Abbey, Glastonbury.

McEwen—Mackintosh.—On June 2, at Glasgow, William McEwen, jun., Esq., to Margaret Jane Rintoul, second daughter of Alexander Mackintosh, M.D., Honorary Consulting Physician, Royal Asylum, Glasgow.

Rowbotham—Isaac.—On May 27, at Hammersmith, John Edward, son of W. Rowbotham, M.R.C.S., of Woolwich, to Marian Ann, youngest daughter of the late Rev. R. Bevill Isaac.

DEATHS.

Andrews, William, M.R.C.S., at Breaston, Derbyshire, on May 28, aged 68.

Bontflower, Helen, youngest daughter of John Bontflower, F.R.C.S., of Manchester, at the Covent, Edgware, London, on May 31.

Farnfield, W. Edmund, L.R.C.P., formerly of Fir-grove, 206, Brixton-road, at 3, St. Saviour's-road, Brixton-rise, S.W., on May 26, in his 34th year.

Grayling, George, M.D., at Sheldwich House, Forest-hill, on May 29, aged 62.

Hills, George, M.D., F.R.C.S., late of Arundel, Sussex, at 34, Bridge-road West, Battersea, on May 24, aged 73.

Humphry, John Mivard Charles, eldest son of John Humphry, M.R.C.S., Medical Superintendent of the County Lunatic Asylum, at Stone, Aylesbury, on May 27, aged 21.

Keen, Thomas, M.R.C.S., at 209, King's-road, Chelsea, on May 31.

Taylor, Alfred Swaine, M.D., F.R.S., at 15, St. James's-terrace, Regent's-park, on May 27, in his 74th year.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

Bexley Local Board.—Medical Officer. Candidates must be duly qualified and registered and reside in the district. Applications to be sent to Thomas Kelsey, Esq., on or before June 8.

Central London Sick Asylum District.—Assistant Medical Officer and Dispenser. (*For further particulars see Advertisement.*)

East Riding Lunatic Asylum.—Assistant Medical Officer. Candidates must be under thirty years of age and unmarried. Applications, with testimonials, to be sent to Edmund B. Whitcombe, Esq., Medical Superintendent, not later than June 18.

Gateshead Dispensary.—Assistant-Surgeon. Applications, with testimonials, to be sent to Mr. Joseph Jordan, Hon. Secretary, Dispensary, West-street, Gateshead, on or before June 15.

Kent and Canterbury Hospital.—House-Surgeon. Candidates must be unmarried, and not more than forty years of age. (*For further particulars see Advertisement.*)

Kirkmichael (Parish of), Banffshire.—Medical Officer. For particulars apply to Mr. James Easson, Teacher, Tomintoul.

St. Mary's Hospital, Paddington.—Assistant Physiaian. Candidates must be Fellows or Members of one of the Colleges of Physicians of the United Kingdom. Applications, with testimonials, to be sent to Joseph G. Wilkinson, Esq., Secretary, on or before June 10.

St. Matthew, Bethnal-green.—Resident Medical Officer. Candidates must possess a double qualification in medicine and surgery. (*For further particulars see Advertisement.*)

Sheffield Friendly Societies' Medical Institution.—Senior Medical Officer. Salary £200 per annum and residence. Also a duly qualified Junior. Applications, with testimonials, to be sent to the Secretary, 308, Shales Moor, Sheffield.

Small-pox and Vaccination Hospital, Highgate-hill, Upper Holloway.—Resident Surgeon. Candidates must be members of the Royal College of Surgeons of England, and Licentiates of the London Society of Apothecaries, and unmarried. Board and residence provided by the Hospital. (*For further particulars see Advertisement.*)

Whitehaven and West Cumberland Infirmary and Fever Hospital.—House-Surgeon. Applications, with testimonials (prepaid), to be sent to Mr. James Knight, Secretary, before June 25.

UNION AND PAROCHIAL MEDICAL SERVICE.

⁂ The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Manchester Township.—Mr. Joseph Westmorland has resigned the St. Michael's District: salary £170 per annum.

APPOINTMENTS.

Battle Union.—Rashell Thomas Davison, M.B., to the Second District.

Greenwich Union.—Charles H. Hartt, L.R.C.S. Ire., L.K. & Q.C.P. Ire., as Assistant Medical Officer and Dispenser at the Workhouse and Infirmary.

Hartley Wintney Union.—Thomas George Lithgow, L.R.C.P. Lond., L.F.P. & S. and L.M. Glasg., L.S.A. Lond., to the Sixth District.

Liverpool Parish.—Wm. Whitford, M.D., M.C. Queen's Univ. Ire., to the Fifth District.

St. Matthew, Bethnal-green, Parish.—Perceval C. Boyd, L.R.C.P. Edin., L.R.C.S. Edin., as Assistant Medical Officer at the Workhouse.

Staines Union.—Louis Francis Lundy, M.R.C.S. Eng. and L.S.A., to the Sunbury District.

Stoke-upon-Trent Parish.—Alfred Averill, M.R.C.S. Eng. and L.S.A., to the Longton District.

Dr. John Brunton has been re-elected Examiner in Midwifery and Medical Jurisprudence at Glasgow University for a further term of four years.

Dr. Vandyke Carter.—We are sorry to learn that this eminent medical officer is compelled to return home on sick leave, his health having broken down from "recurrent" or relapsing fever.

Purulent Ophthalmia.—Dr. Galezowski strongly recommends the following collyrium, especially at the commencement of purulent ophthalmia:—Neutral sulphate of eserine two centigrammes, distilled water ten grammes; a few drops to be placed in the affected eye twice a day. Some leeches should be also applied to the temple of the same side. When the collyrium proves insufficient an ointment should also be used twice a day, composed of from two to five centigrammes of nitrate of silver and five grammes of vaseline.—*Union Méd.*, May 18.

At a meeting of the Council of the Poor-law Medical Officers' Association, held at their rooms, 3, Bolt-court, Fleet-street, June 1, it was resolved that a petition in their name should be forwarded to the House of Commons in support of the Medical Charities (Ireland) Bill now before the Legislature.

Edison's Polyform.—This is a new patent medicine said to be discovered by Edison, and widely advertised as representing what his great genius can do when applied to therapeutics. It is nothing but an ordinary liniment, made up chiefly of chloroform, chloral, camphor, and aconite. Small bottles of this cheap and well-known mixture are sold for $1 50c. It is a pitiable fact that Mr. Edison should allow his name to endorse a nostrum which is no better than half a dozen other liniments, and which is sold at an exorbitant price.—*New York Med. Record,* May 8.

The "John Hunter Medal."—On visiting the College of Surgeons a few days since, we saw this superb medal. It is executed in pure gold, and of the value of fifty guineas. Dr. George Arthur Woods, of Southport, a member of the College, to whom it was awarded as the Collegial-Triennial Prize, is the first to take this medal instead of the money. On the front is a fine portrait in bold relief of Hunter, with the simple words "John Hunter." On the back is a shield surmounted by a wreath of laurel with the name of the winner of this grand prize, already known as one of the Astley Cooper prizemen.

Preventing Pitting in Small-pox.—There is another method that is easier, and my impression is that it is quite as good as any of them, and that is the use of collodion blackened with animal black. The animal black gives a very fine powder, and mixed with the collodion while this is soft, and then applied with a brush all over the face, it adheres very well. And this, it is believed, will act so as to cause abortion of the pustules upon the part to which it is applied. It will not do to apply it to any considerable part of the body, but the face is most important, and it is applied only to this. —*Dr. Alonzo Clarke, New York Med. Record,* May 8.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Mr. Sykes, Mexborough.—In certain parts of the country we know that it is customary to notify the commencement of practice by advertisement. It is a custom of which we do not approve, and still less do we approve of such a handbill as that you enclose.

The Sale of Spirituous and Malt Liquors at Grangemouth.—Lord Zetland has enforced the prohibitions contained in the title-deeds of the whole licensed premises in his burgh of Grangemouth, against the liquor traffic, from and after the 15th ult. He will allow four licensed grocers and an hotel to continue business, provided they are conducted to his satisfaction. It is reported that this step has been taken on the approval of four-fifths of the inhabitants. It appears, however, that 1402 inhabitants not under eighteen years of age, of whom 400 are ratepayers, have, by a memorial to his lordship, expressed their surprise at the statement relative to the four-fifths of the householders and parents of Grangemouth. The memorialists point out the serious inconvenience to the inhabitants, the injury to trade, the great loss to occupiers of premises, and submit that the prohibitions should be withdrawn, and other means resorted to, with the view to the promotion of temperance.

W. Thorpe S.—Yes, we hear that the extension of the Royal Brine Baths at Droitwich has, at last, been resolved upon by a limited company. Mr. Bainbrigge will continue to be the medical adviser and superintendent. The new establishment will have accommodation for fifty patients.

Model Cottages.—The Agricultural Society has awarded the Duke of Devonshire the gold medal of the first class for the building of his cottages in the county of Cork. These cottages were considered by the judges to combine in the greatest degree the greatest comfort with the greatest economy. All the materials were found upon the estate, and the cost of each cottage was £90 7s. 6d. without offices, or £100 4s. 6d. with offices. The judges pronounced the work to be of the best quality, both in plans and execution.

"*M.D.,*" *Scarborough.*—Not having yet signed the by-laws, although elected a Fellow five years ago, you cannot record your vote in favour of the candidate mentioned. We understand there will be a meeting of the Council to admit such Fellows on Thursday next. Send notice to the Secretary of your intention to attend for that purpose. To become a steward of the dinner write to the honorary secretary, Mr. B. T. Lowne, F.R.C.S. Sir J. Paget will be the Chairman.

The Contagious Diseases Acts.—Mr. Thomas Stokes, M.R.C.S., of Cheltenham, in commenting on some publications on this subject sent to him by Dr. Bell Taylor, of Nottingham, remarks that, while giving the opponents of these Acts every credit for motive, position in society, and zeal, he thinks their conclusions superficial, prejudiced, and full of unwarrantable imputations and attacks on the Acts, their administration, and supporters. Without proper investigation an outcry is plausibly raised for petitions to repeal these Acts; but they have been inquired into over and over again, their opponents have had ample opportunity of showing their evil influence, but they have failed to do so. Petitions signed by ignorant people and sentimentalists can have little weight with a practical body like the House of Commons.

Infringing the Law.—Three coastguardmen have been fined at Eastbourne in penalties for selling exciseable liquors at the Beachey Head station.

Census.—At the last census, in 1871, the United Kingdom was divided into 31,916 enumeration districts, and there were, besides, district enumerators for 627 public institutions. The fee of each enumerator in 1871 was a guinea, with a further fee of 2s. 6d. per 100 persons enumerated after the first 400.

Fined all alike.—We are glad to observe that the magistrate at the Worship-street Police-court a few days since would make no distinction between the cases in the fines he imposed on three milk-dealers for adulterating milk with water. The adulteration was a fraud. Each of the defendants was fined £5 and costs. The prosecutions were instituted by the Vestry of the parish of Bethnal-green, and the adulteration was proved by the sanitary inspectors.

A Witness on a Steam Boiler Explosion Case.—We believe there are only two associations of the kind you inquire about—the "Midland" and the "Manchester" Steam Boilers Inspection Associations. These associations do a great deal of good, to which little publicity is given. They "prevent" boiler explosions by gratuitous scientific examination of all boilers in their districts. They possess no authority to caution or interfere in any way, but the annual reports of these societies disclose the use of worn-out, defective, and patched boilers, and of "boilers unfit for any steam purposes whatever." We need but point to the recent fatalities from steam boiler explosions at Glasgow, Silvertown, and at Walsall as the latest proofs of the necessity for some legislative interference to provide against the existing dangers from such boilers.

J. Ryan B.—From the last annual report of the Richmond Lunatic Asylum, Dublin, we learn that the total expenditure for the year was at the rate of £25 10s. for each patient. The number of patients in the institution at the end of the year was 1000. About 200 deaths had occurred during the twelve months.

Alleged Libel by a Sanitary Inspecctor.—At Portsmouth, one of the sanitary inspectors was charged at the police-court, by a cattle dealer, with libel. A summons against the dealer for having a live diseased cow, said to be intended for human food, was dismissed; whereupon the defendant wrote to the newspapers, speaking of the necessity for a stipendiary magistrate, and otherwise referring to the dealer in language which was considered libellous. Eventually an apology was made, and as the Bench thought grave reflections had been cast on the sitting magistrates at the trial, the defendant promised to publicly apologise to them when they next appeared on the bench.

Worthy of Imitation.—At Bristol efforts are being made to adapt the old graveyards around the parish churches of the city into ornamental grounds for the use of the inhabitants. Temple Churchyard, at considerable cost, has been thus utilised.

The Medical Fee System.—It is generally accepted that when Valentinian established in Rome fourteen salaried physicians to attend gratuitously on the poor, and obliged, by the same law, every other physician to accept the voluntary donation of each patient when he had recovered from his disease, without making express charge, or taking advantage of any promises rashly made under suffering, although it was not the fee system, it was most probably the groundwork of it. This model of after-payment remained for many centuries the custom of the empire.

Food from Australia.—Arrangements are being made for large consignments of frozen butter, frozen vegetables, as well as frozen meat, to be sent to England.

The Warrington Water Company Fined.—A firm at Warrington brought an action in the Warrington Police-court last week against the Warrington Waterworks Company for refusing to supply water to their house at the works used by the keeper. The defence was that the water when supplied was used for other than domestic purposes, as much as 600 gallons a day being consumed. The defendants were fined 50s. and costs. Notice of appeal was given.

Benevolence.—The Goldsmiths' Company have made a grant of £100 to the fund for building the new wing, and £100 to the general fund, of the Royal Hospital for Incurables, West Hill, Putney Heath.

BOOKS, ETC., RECEIVED—

On the Management of Infantile Eczema, by L. Duncan Bulkey, A.M., M.D.—Beiträge zur Gerichtlichen Medicin, von Prof. Dr. Hermann Friedberg—Report of the Fulham Hospital for the Year 1879—Science a Stronghold of Belief, by Richard Budd Painter, M.D., F.R.C.S.—Report on the Sanitary Condition of the Whitechapel District for the Quarter ended April 3, 1880—Paralysie Vaso-Motrice, par Maurice Lannois.

COMMUNICATIONS have been received from—

Dr. J. W. Moore, Dublin; Mr. Watson Cheyne, London; Dr. Wolfe, Glasgow; Mr. H. Sykes, Mexborough; Mr. E. L. Hussey, Oxford; Sir Joseph Fayrer, London; The Secretary of the General Lying-in Hospital, Lambeth; The Secretary of the Society of Arts; The Secretary of the British Equitable Assurance Company; Lieutenant-Colonel Bolton, London; Dr. Barnardo, London; The Registrar-General of Ireland; The Secretary of the St. Mary's Hospital Medical School; Mr. J. H. Craigie, London; The Registrar of Apothecaries' Hall, London; The Assistant-Secretary of the Royal Microscopical Society; The Secretary of the Royal Medical and Chirurgical Society; Mr. John Chatto, London; Dr. Septimus Gibbon, London; Mr. T. M. Stone, London; Dr. Sawyer, Birmingham; The Directors of the Anthropological Institute of Great Britain; The Registrar-General, Edinburgh; Dr. E. I. Sparks, London; Mr. S. F. Murphy, London; Dr. R. H. Semple, London; Dr. Stephen Mackenzie, London; Mr. F. R. Greenwood, London; Mr. Rushton Parker, Liverpool; Dr. Radford, Manchester; Dr. John Brunton, London; The Hon. Secretary of the Odontological Society of Great Britain; Dr. Richard Neale, London; The Secretary of the Royal Institution, London; Dr. James B. Pettigrew, St. Andrews; Mr. C. W. Gregory, Bristol; The Secretary of the Poor-Law Medical Officers' Association; Mr. G. H. Page, Dublin.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Centralblatt für die Medicinischen Wissenschaften—Nature—Revue Médicale—Occasional Notes—Gazette Hebdomadaire—Louisville Medical News—El Siglo Medico—El Medico y Cirujano—American Bookseller—Night and Day—Weekly Mercury, Plymouth, May 29—Veterinarian—El Jurado Médico-Farmaceutico—Edinburgh Medical Journal—Archives Générales de Médecine—Education Journal of Trinity College, London—Therapeutic Gazette—Boston Medical and Surgical Journal—British Whig, Kingston, Canada, May 20—Glasgow Medical Journal—Monthly Homœopathic Review.

APPOINTMENTS FOR THE WEEK.

June 5. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

Royal Institution, 3 p.m. Prof. H. Morley, "The Dramatists before Shakespeare."

7. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Royal Institution, 5 p.m. General Monthly Meeting.

Odontological Society, 8 p.m. Mr. I. K. Mummery, "On a Remarkable Case of Strabismus and Blanching of the Hair arising from a Diseased Tooth; with Additional Instances of Nervous Disorders arising from Dental Irritation." Also a short Paper by Mr. Edwin Canton. Casual Communications from Dr. Walker.

8. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Anthropological Institute, 8 p.m. Mr. F. G. Hilton Price, "On Camps on the Malvern Hills." Rev. R. H. Codrington, "On Religious Beliefs and Practices in Melanesia." Mr. Peter Bemridge, "On the Aborigines of Victoria."

Royal Medical and Chirurgical Society, 8½ p.m. Dr. Douglas Powell and Mr. R. W. Lyell, "On Basic Cavity of the Lung treated by Paracentesis." Mr. Henry Morris, "On a Case of Aneurism of the External Carotid, in which, after Failure of the Ligature of the Common Carotid, the Old Operation was Successful."

9. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Lister), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.; National Orthopædic, Great Portland-street, 10 a.m.

Royal Microscopical Society, 8 p.m. Professor H. Smith, "On the Life History of the Diatomaceæ." Mr. S. Holmes, "On a New Binocular Microscope with Isophotal Prism." Mr. W. H. Gilburt, "On the Structure and Functions of the Scale-Leaves of *Lathræa squamaria*." Mr. J. W. Stephenson, "On the Relative Visibility of Minute Structures when Mounted in Phosphorus, Bisulphide of Carbon, or other Media."

10. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

11. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, May 29, 1880.

BIRTHS.

Births of Boys, 1358; Girls, 1260; Total, 2618.
Corrected average in the 10 years 1870-79, 2366·1.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	692	641	1333
Average of the ten years 1870-79, corrected to increased population	759·7	680·4	1440·1
Deaths of people aged 80 and upwards ...	...	...	47

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa
West	561359	1	11	6	2	13	...	...	1	4
North ...	751729	8	4	14	1	21	...	3	...	8
Central ...	334369	...	1	5	...	5	...	1	...	...
East	639111	...	7	19	...	15	...	...	1	3
South	967692	1	7	24	8	22	...	8	...	2
Total	3254260	10	30	68	11	76	...	12	2	17

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·884 in.
Mean temperature	59·4°
Highest point of thermometer	87·5°
Lowest point of thermometer	39·7°
Mean dew-point temperature	47·3°
General direction of wind	S.W.
Whole amount of rain in the week	0·02 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, May 29, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1880.*	Persons to an Acre. (1880.)	Births Registered during the week ending May 29.	Deaths Registered during the week ending May 29.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Centimetres.
London	3664149	48·6	2618	1333	87·5	39·7	58·4	14·66	0·02	0·05
Brighton	107321	45·6	57	43	71·0	43·5	55·5	13·06	0·15	0·38
Portsmouth ...	134224	29·9	69	47	...	...	...	...	...	...
Norwich	85827	11·5	56	39	81·0	42·0	56·4	13·55	0·12	0·30
Plymouth	74993	53·8	51	27	65·6	39·6	54·1	12·28	0·54	1·37
Bristol	213536	48·0	168	90	70·0	41·5	52·7	11·50	0·81	2·06
Wolverhampton ...	75970	22·4	58	23	67·5	36·7	49·8	9·89	1·45	3·68
Birmingham ...	394738	47·0	295	142	...	...	...	...	...	...
Leicester	129912	40·6	92	46	72·8	40·8	52·9	11·61	0·48	1·22
Nottingham ...	173827	17·4	127	68	77·6	36·5	53·7	12·06	0·72	1·83
Liverpool	544056	104·4	478	244	61·8	41·8	50·2	10·11	1·39	3·53
Manchester ...	363130	84·6	298	180	...	...	...	...	...	...
Salford	185786	35·9	162	102	...	...	...	...	...	...
Oldham	115413	24·7	94	50	...	...	...	...	...	...
Bradford	197196	27·3	108	72	62·0	44·0	51·1	10·62	1·57	3·98
Leeds	318929	14·8	239	101	65·0	42·0	52·1	11·17	1·59	4·04
Sheffield	304938	15·5	253	114	65·0	39·0	51·1	10·62	1·61	4·09
Hull	149627	41·2	115	48	69·0	40·0	51·4	10·78	0·99	2·51
Sunderland ...	116730	42·2	94	50	72·0	45·0	55·3	12·95	0·74	1·88
Newcastle-on-Tyne	149366	27·8	108	68	...	...	...	...	...	...
Edinburgh	229839	54·8	201	110	61·2	39·4	51·2	10·67	0·23	0·58
Glasgow	589598	97·7	428	263	...	...	...	...	...	...
Dublin	314666	31·3	185	229	61·6	38·3	51·3	10·73	0·23	0·58
Total of 23 Towns in United Kingdom	8633571	39·2	6354	3489	87·5	36·5	53·0	11·67	0·79	2·01

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·88 in. The lowest reading was 29·56 in. on Thursday morning, and the highest 30·29 in. on Saturday morning.

* The figures for the English and Scottish towns (except for Nottingham, Salford, and Oldham) are the numbers enumerated in April, 1871, raised to the middle of 1880 by the addition of nine years and a quarter's increase, calculated at the rate which prevailed between 1861 and 1871. Revised estimates have been adopted for Nottingham, Salford, and Oldham, based upon special returns of inhabited houses existing within those boroughs; the population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

ON SOME PUBLIC HEALTH POINTS IN THE MANAGEMENT OF A SMALL-POX HOSPITAL.

By ALEXANDER COLLIE, M.D.,
Medical Officer to the Homerton Fever Hospital.(a)

(*Concluded from page* 606.)

I NOW come to consider the question of ambulances. These are properly a portion of the infectious hospital—are, in fact, the hospital in motion,—and unless properly managed may spread small-pox. That they do this by simply passing along the street is, in my opinion, extremely improbable; but it is probable that they may do so if they be permitted to stop at public-houses, especially on their way to the hospital with the patient. And clearly, if the disease should arise in this way, it would not arise always near the hospital, but, in cases in which patients may have to be conveyed long distances, at the halfway-house, where the influence of the hospital would be apt to be forgotten. Indeed, it is quite easy to imagine conditions in which the hospital would be a protection to those who lived near it, and a danger to those who lived far away from it. Thus, if the hospital contractors lived at a distance from the hospital, in the event of their contracting small-pox it would be at their homes, remote from the hospital where the disease would show itself. So with the ambulances; they would not spread small-pox by passing along the roads, but by stopping at points there, which, under the present mode of moving the sick, they may very well do. The system at present in force stands in need of great improvement, both in respect of the welfare of the sick and the safety of the public. To satisfy the former requirement an ambulance in many ways of special construction is necessary. To accomplish the latter several special points have to be attended to:—(1) I would recommend that the ambulance be made of a good hard wood (the comfort of the sick being secured by pillows), such as may be easily washed, and that it be so constructed as to permit of free exposure of the interior to the air during the washing; (2) that it be distinguished externally by the red cross; (3) that it be properly horsed; and (4) that its drivers and other attendants be paid officers in uniform. Policemen and others would readily recognise such an ambulance, and the danger of stopping at public-houses during the conveyance of patients—a danger not only to the public, but to the sick—would be reduced to a minimum. Such an ambulance as I have suggested may be disinfected thoroughly by the simple process of washing with soap-and-water by two men in forty-five minutes. The actual time occupied in the disinfection of an ambulance, under my own personal superintendence, was thirty-three minutes, and I am of opinion that, with such efficient disinfection as I would appoint, the maintenance of two sets of ambulances (one for small-pox and one for fever) would become unnecessary. The bedding, pillows, blankets, etc.—in other words, the equipment of the ambulance—should be removed entirely for disinfection by washing and boiling, and by drying in the open air; and the disinfected ambulance should be re-equipped from the hospital or other store. The clothes of the patient should, as a rule, be burnt—the only efficient way in which such things can be rendered harmless. It will, I think, be evident that so long as the removal of the sick is left to numerous authorities, the suggestions which I have made will not be efficiently carried out. Uniformity of ambulance, uniformity of ambulance, drivers, etc., involves uniformity of authority.

I now come to a point of the utmost importance, and one upon which opinions will differ; I mean the discharge of patients. When is a small-pox patient fit to be discharged? In answering this question we have to regard chiefly the morbid products of the disease, the scabs and the scales. The time at which these fall off varies widely in different cases, so that no general rule can be laid down, and therefore each case must be considered in itself. In every epidemic cases will be found which may be discharged safely in a few days, whilst others may require six, nine, or even twelve months; an average of recovered cases would be about two months. The rule, however, to be followed appears to me to be clear: the scabs ought to have everywhere entirely disappeared, and (what I fear is often neglected) the "scaling" which follows these should have disappeared too. After this, and having had a few baths and new clothes, the patient may safely be sent anywhere. The rule at the Homerton Fever Hospital was that every patient should bathe himself every second day from the time he got up until his discharge. How this removal of scabs and scales may be facilitated it is no part of my present purpose to consider. So much for the living; there remains for brief consideration the disposal of the dead.

The coffins should be made of a good hard wood of sufficient thickness, and filled up with charcoal. This would enable bodies to be sent safely by rail or otherwise, and would permit of bodies lying in church or elsewhere without risk. With this precaution I on one occasion sanctioned the removal of a body of a clergyman, dead of an infectious disease, to church the night previous to a public service; on another, the body of a young man, dead of scarlet fever, was sent by rail into Wales; and on a third the body of a young man, dead of enteric, was sent into the country, the precaution we speak of having been taken under my own personal superintendence.

Having now, I trust, discharged safely the living and the dead, I will here add a few words on the waste products of the hospital. Poultices, tow used in washing, dressings of all kinds, should of course be burnt, and not thrown into the dustbin. Floor "sweepings" and "dustings" should also be burnt, and sifted ash alone should be allowed to leave the hospital. Waste food should be consumed on the premises, for which purpose a pig or pigs might be kept. If this be objected to or impossible, it should be burnt. The drainage should of course be good; but I do not think that there is anything special to be said on this point, there being no evidence of any kind which would lead one to suspect that small-pox may be carried in this way—a view which gains strength from the post-mortem-established fact that the intestine is always healthy.

Having considered the points directly connected with the hospital itself and the patients, I now come to the question of the hospital staff and the regulation of visitors. As regards the former, the nurses and servants should reside within the hospital wall, and whilst on duty should wear a uniform, with some kind of head-dress to prevent scabs and scales from collecting on the hair, and before going out they should have a bath and a complete change of clothing, and they should leave and return to the hospital by the matron's entrance. The medical officers (if it be necessary to have such on the premises), the steward, the matron, the gardener, and the engineer, should reside outside the hospital wall, as indicated on the plan. Whilst on duty they should be in uniform. The chaplain should wear a cassock. The hospital messenger should not be allowed to deliver letters or parcels in the wards. And here, before leaving the question of the hospital staff, I would make one remark. The engineer, *i.e.*, the person who superintends the disinfecting, who is constantly in and out of wards, and not infrequently covered with feathers, should, of all persons in a small-pox hospital, reside on the premises, and should take a bath and change his clothing before leaving the hospital.

And here, before I enter upon the consideration of my last question, I will offer a few remarks on the relation of the lower animals to small-pox. The subject is one of great interest, and would demand separate treatment. I will therefore only say that the rule "No dogs allowed" should be rigidly enforced. Dogs exposed to small-pox, unless properly vaccinated, take a disease very like human small-pox, and they take it severely too. The bearing of this on the public health is self-evident, and is of importance to persons in possession of valuable animals.

I now come to my last point, the question of visitors, and in regard of these it is necessary in the first place to dispose of a prevalent fallacy. It is a widespread opinion that small-pox and fever hospitals are, of themselves, and by reason of their containing several patients, specially dangerous as centres of infection; that there the poison is concentrated; and that all who may be subject to it are, by visiting the hospital, sure to be infected. This is, in my opinion, a complete mistake. In an experience of small-pox

(a) Read before the Society of Medical Officers of Health, May 21.

and fever hospitals extending over fifteen years I cannot call to my mind any case in which a visitor to a small-pox hospital caught the disease *by visiting* the hospital. I do not say that therefore infection in this way never took place,—that would be absurd; but I do say that it was not frequent, and this "infrequency" is what a full knowledge of the *actual circumstances* of an infectious hospital would lead us to expect. In a properly managed, properly constructed hospital, with efficient and continuous ventilation, there is no concentration of poison, but, on the contrary, an actual dilution of it. The risk attending the visits to a small-pox hospital are somewhat *less* than the risk of visiting the private small-pox home. It is in the latter, in the small room with closed door and closed window, that the poison is concentrated; not in the former, with complete cleanliness and efficient ventilation by windows, open day and night. In fact, if the private case be one of unusual severity, the risk of visiting it will be *very much greater* than the risk of visiting a ward of eighteen or twenty beds—a ward of 42,000 cubic feet capacity. In such a ward, well managed, its composition at any one time would be somewhat as follows, assuming that it were fully occupied:—Of the eighteen patients, ten would be out of bed at ordinary visiting times, and therefore probably not in the ward at all, or, if in it, not exhaling small-pox poison; five others would have recovered from the fever, although too weak to be out of bed, and would not be exhaling small-pox poison. There would remain three cases (and we shall allow that they are all bad—a large concession) infecting the air continuously by their exhalations. What is the chance of three such cases, with 30,000 cubic feet of space, and open windows, infecting a possible visitor, compared to the chance of one case in a narrow room with closed door and window? Of course, it is not contended that this description is strictly accurate, but it is so substantially, and it shows, if clearly apprehended, which description may fail to do, that the risk of visiting the small-pox hospital is not in any degree greater than the risk of visiting the private house.

This being granted, then the question resolves itself into this, viz., whether the infectious sick should be treated otherwise than in public hospitals? If it be unlawful for a wife to visit her husband at a small-pox hospital, much more should or must it be unlawful for her to nurse him at his own home. If it be dangerous for a mother or father to visit their child at a small-pox hospital, much greater must the danger be if they keep it and nurse it at home. Whether those who object to visiting at small-pox hospitals except in cases of dangerous illness (a vague phrase, differently interpreted by different persons, and which in practice often means, and necessarily often means, that the hastily summoned wife arrives only to find herself a widow), I do not know, but to this length the principle of rigid exclusion advocated by some leads. It means that in cases of illness, when the support and encouragement of near relatives is most needed, this is to be legally prevented—that the husband is to be prevented from seeing his wife, the wife from seeing her husband, and both from seeing their children,—and this because certain persons are wrongly of opinion that small-pox hospitals are specially infectious because of a concentration of the poison which has no real existence. I do not say that in no circumstances would it be right thus to embitter a lot already hard, thus to encourage the notion that bare danger to life is a valid reason for neglecting our primary duties, thus to deprive the sick man or the sick child of what would sometimes help them on the way to recovery more than all the physicians and all the physic in the world—the cheering visit of wife or mother,—but it ought to be for some other reason than a "groundless assumption," and for some other object than the protection of those foolish or thoughtless people who, with little trouble to themselves, might have placed themselves beyond danger by means of vaccination.

Granting, however, that it be right to deprive the sick of the visits of their friends under reasonable restrictions, is there any need for the absolute restriction which some would impose? Is there such a tendency on the part of people generally to enter such hospitals, that, without rigid rules of exclusion, such hospitals would be flooded by the idle and the curious? I think not. On the contrary, the great majority of even poor people have such a horror of small-pox that without some pressing business they would not seek to enter the hospital. And so only near relatives or personal friends would as a matter of fact seek to visit. Now, what in the majority of cases would be the risk to these? Little or none. For why? Because, as a rule, when small-pox strikes it strikes at once. There is no need here, as in typhus fever, in scarlet fever, in enteric fever, of more or less continuous exposure. If it do not strike at once it will not strike at all at that particular time. Thus, if a man be exposed with immunity to-day, he will possess the same immunity to-morrow; if for some time during one month with immunity, he will possess the same immunity the next. If, for instance, he have been exposed fairly before puberty, he will continue to be exposed with equal immunity until after puberty; and if he be fairly exposed with immunity after puberty, he may be exposed with immunity for the rest of life. Of course there are exceptions, but the rule I believe to be as I have here stated it.

Now, the persons who would usually wish to visit a small-pox hospital, who are they? The wife who has shared the sick husband's bed, or *vice versâ*; the husband who has nursed the wife, or the mother who has nursed, mayhap suckled, the child; the brother and the sister who have shared the small-pox room or the small-pox bed; in short, those who have been exposed with immunity under circumstances in which, had they been susceptible, they were almost certain to have contracted the disease: these are the people who would be kept out, and that under the false belief that the danger which they would incur exceeds that which they have already passed through safely! But these prohibitory rules are not only founded on assumptions, they are ineffectual for their purpose, and generally, from a public health point of view, deplorable. Correspondence by letter is increased, anxiety prompts more frequent visitation of the hospital-gate, and thus the avenues to the hospital are more frequented by persons who live in homes in which small-pox has been. Confidence in the hospital is seriously weakened by the difficulty, nay, impossibility, of friends receiving proper information of the condition of the sick. A general assurance from a gate-porter that so and so is not on the visiting list, and is therefore "doing well," satisfies nobody, much less an anxious parent. It would not satisfy you; I am very sure that it would not satisfy me. And what is the result to the public health? This: that cases are kept at home until they become unmanageable; and that the mild cases, the real danger, are kept at home to be let do as they please, to be discharged as soon as they get out of bed, armed as they are with scabs and scales capable of infecting a whole community. It is not, however, here maintained that there should be no restrictions. On the contrary; a sick-room is no place for the curious, and as regards small-pox I would formulate my rule somewhat as follows:—That, generally, visits to the hospital may be made by permission of the medical superintendent, with a general instruction that visiting be discouraged; that visitors generally be advised of the risk they may run; that in the event of persons from the country desiring to visit, they be advised as to the precautions which they ought to take in the case of infection; but that no husband be prevented from visiting his wife, no wife from visiting her husband, nor these from visiting their children if they desire to do so. Anything beyond this appears to me to be unjust, unnecessary, and prejudicial to the public health. They may sometimes risk their lives, but this is often a duty to be encouraged; and, apart from higher considerations, life would be robbed of half its pleasure if deprived of all its risks—

"Oblectat pavor ipse animum; sunt gaudia curis."

Such, then, are the precautions which, from a public health point of view, appear to me to be necessary in the management of a small-pox hospital. In fever hospitals such elaborate precautions are unnecessary. Each individual may, however, render himself and his family independent of any precaution whatever. It is only necessary that he and they be properly vaccinated, and then he and they may not only live safely near a small-pox hospital, but safely in one. It is to this that we must look for protection from small-pox; and, due regard being had to this, the precise regulations which have been laid down may be disregarded. If the vaccinated child may safely suckle from its small-pox mother, and the vaccinated nurse safely tend the small-pox patient, a small-pox hospital will be no source of danger in a properly vaccinated neighbourhood.

ORIGINAL COMMUNICATIONS.

ACUTE ŒDEMA: BERI-BERI.

By SIR JOSEPH FAYRER, M.D., F.R.S.

In the year 1877 a disease appeared in the southern suburbs of Calcutta during the rainy season, and was again observed over a large area of the same suburbs and in some villages to the east of Calcutta in 1878. It subsided as the cold weather advanced. The same disease prevailed in Dacca in January and February, 1879, and appeared at Shillong, in the Cossyah Hills, in October, 1878. Dr. O'Brien states that 200 cases had occurred in that station, and that new cases were appearing daily. He believed that it was imported from Dacca, and records that it prevailed in Cachar, Sylhet, the Cossyah Hills, and some of the stations of Assam proper. This statement is confirmed by Dr. Nairne, of South Sylhet, who reported that it prevailed in August and September.

Dr. K. Macleod, the accomplished Professor of Surgery and Health Officer of Calcutta, to whom I am indebted for the above information, says in his municipal report of April, 1880, that the present epidemic broke out towards the close of 1879. A fresh outbreak seems to have occurred in the southern and eastern suburbs, and Calcutta itself was invaded for the first time. The portions of the town where it prevailed are continuous with or contiguous to those parts of the suburbs which were previously attacked, and he gives the number of deaths from this "acute œdema" during the first quarter of the present year. It appears that they were as follows:—

	Mixed Races.		Hindus.		Mohammedans.	
	Males.	Females	Males.	Females	Males.	Females
January . . .	...	...	5	9	3	4
February . . .	...	1	17	14	18	33
March	...	...	6	5	6	22
Totals . .	...	1	28	28	27	59
	1		56		86	

—making 143 deaths in the three months; the disease apparently being confined almost entirely to the native races, as no death in the case of European, and only one of mixed race, is recorded.

It further appears that in relation to the population of the suburbs the prevalence and mortality have been slight, and still less so in the town. For example, a special inquiry, instituted by Dr. Macleod of one district, Short's Bazaar, gave the following results:—

Number of houses	60
,, of inhabitants, say	390
,, of houses attacked	10
,, of inhabitants in these . . .	65
,, attacked	15
,, died	10

The rate of mortality given by the town figures is about 20 per cent., and by the suburban about 44 per cent. These figures are not, however, entitled to more reliance than to indicate that the mortality is considerable in relation to cases, though slight in relation to population.

Dr. Macleod, who appears to have investigated the subject with much care and skill, summarises his observations as follows:—

He says it attacked houses in a village in a promiscuous way—those affected being mostly scattered throughout the locality, and not necessarily contiguous. As a rule, several or all the members of a household have been seized, single cases in a family being exceptional. The attacks occurred simultaneously or in rapid succession, as if from the operation of a common cause. The seizure of different houses in a village seems to have occurred about the same time.

The disease, when the investigation was made, appeared to be dying out.

He summarises the symptoms as follows:—Swelling of the limbs (the lower most) and the body occasionally.

Fever sometimes before, sometimes after, the swelling; in some cases absent. Bowel complaint in many cases, diarrhœa most commonly, dysentery in a few.

Burning and pain in the affected limbs at the commencement; shortness of breath, cough and palpitation, great emaciation, exhaustion, and anæmia in severe cases, well marked in all.

The duration of the disease appears to be about two months in cases of average severity, leaving the sufferer greatly enfeebled.

In fatal cases there is great disturbance of respiration and circulation; and death is generally sudden.

Dr. Macleod does not describe the condition of the spleen, liver, kidneys, or other abdominal viscera, the condition of the blood, nor does he allude to the question of embolism or thrombosis, the presence or absence of fibrinous coagula in the right heart or pulmonary arteries. In reference to the nature of the disease, which, in the epidemic form at all events, was new in Bengal, Dr. Macleod says that it is impossible to write very definitely, but that the prevailing opinion is that it is the disease described in Madras and Ceylon as beri-beri, and that he is inclined to take that view himself. With reference to causation, he remarks that he has not been able to pronounce a positive opinion, but that, though it is most prevalent among the poorer classes of Hindus and Mohammedans, it is not confined to them, for that Eurasians, Armenians, and well-to-do natives have suffered. Nor is he able to attribute it to poverty of living, high price of food, or any dietetic condition or consequent constitutional taint; well-fed people, Mohammedans who ate animal food, have suffered; and that the anæmia and scurvy in some cases were rather secondary than original conditions of the disease. Insanitary conditions do not appear to have been a cause, for in this respect the villages and houses where it occurred were not worse than those of many others where the disease did not occur. In short, he was unable to fix upon any one condition, or assemblage of conditions, personal or otherwise, peculiar to the affected places. With regard to contagion, the evidence, he says, is conflicting. By some it is deemed to be infectious, and facts have come to his knowledge that would seem to favour this view. He is not prepared to deny that under certain conditions, seasonal and otherwise, which strongly modify its manner of transfer from man to man, it is so; and that "the gradual spread northwards, the pronounced localisation, and the seizure of whole families, are the most remarkable circumstances in the natural history of the malady, considered from an epidemiological point of view."

I am quite inclined to agree with Dr. Macleod that the disease is beri-beri, and I think that reference to the writings of Malcolmson, Rankin, Heyman, Oudenheim, Mason Good, Carter, and others, would confirm the view that the disease, which within the last few years has assumed an epidemic form in Bengal, is the beri-beri described by them.(a) A form of pernicious anæmia is decribed by Biermer as occurring in more northern climates. Though apparently novel in the epidemic form it has taken, it can hardly be regarded as new, occurring sporadically in Bengal; and I have long thought that some of the cachectic, dropsical, wasted creatures one sees among the lower classes of Bengalees in town or country may fairly be described as sufferers from beri-beri. It is very much to be desired that the pathological anatomy of the disease, the state of the blood, and the condition of the heart and pulmonary vessels in reference to the presence of fibrinous coagula, the state of the tissues, and the possible presence of hæmatozoa or other microzoa within the tissues, the blood, or the juices, may be investigated by the highly skilled pathologists who have already done so much to throw light on the character of disease in India.

Some years ago I made elsewhere a few notes on the disease, and, as it may be of interest at the present time, I would offer a few remarks on the subject.

This disease, which is familiar to English writers as beri-beri, is best known in Southern India and Ceylon. It is endemic on the coasts, extending inland forty to sixty miles, especially in the Northern Circars, Ceylon, and on the

(a) With regard to its epidemicity, the explanation would probably be similar to that which informs us why dysentery, malarial fever, and some other endemic diseases at times assume the epidemic condition; and has to do, probably, with agencies, whether statical or dynamical, with the nature of which we are yet but imperfectly acquainted, but whose operations, as known by effects, and whose real nature and laws it is the aim of the epidemiologist thoroughly to investigate.

Malabar Coast. It occurs also occasionally in other parts of India—in Bengal (where it has recently been epidemic), in Central India, and in the Deccan, and probably all over the peninsula. It is known in Burmah and the Malay peninsula, and in the crews of ships trading to the Persian Gulf, Red Sea, Coast of Africa, Bay of Bengal, Singapore, Siam, and the Indian Archipelago.—(Carter, Morehead, and others.)

On the West Coast, as in other parts of Africa, it is known as the "sleeping sickness"; and Biermer has described a pernicious form of anæmia which seems to be identical, or nearly so, with it, in Europe. It probably occurs, in short, wherever certain conditions of climate, soil, water, food, and habits of life exist. The name is of doubtful origin; it is unknown to the natives of India. Herklotts says it is unaccountable how it crept into general use. It may be, he suggests, from the Hindu word "*bheri*," a sheep, from the fancied resemblance of the gait of the persons affected, to that of a sheep. Some think it is derived from a Cingalese word meaning weakness, the reiteration meaning great weakness.

Carter suggests *bahri*, a sailor, from the Arabic word *bahr*, sea, and *bhayr*, shortness of breath. This may be, as it occurs among Arab sailors.

It has various other origins assigned to it, generally signifying weakness, and it has other synonyms, such as Barbier (Bontius).

According to Malcolmson, the disease in his time was very prevalent among the natives of the Northern Circars, especially in the jails of Masulipatam, Rajamundry, Vizagapatam, Chicacolee, Cuddapah, Bellary. The death-rate in these sites reached 36·5 per cent. among the prisoners, while among sepoys it was 13·9 per cent., amoug Europeans 26·2 per cent., showing that the unfavourable conditions of prison life intensified the disease. Mohammedans suffered more than Hindus. The European mortality was also high. It prevailed most towards the close of the rainy season; wet and cold seemed to develope the tendency to the disease.

It appears that it occurs where causes of debility have been some time in operation, especially in certain climates and localities; certain conditions of soil, air, and water; great alternations of temperature, especially when attended by wet, fatigue, mental and physical depression, deficient or defective diet; malaria and other undefiued atmospheric and telluric influences—all, in fact, that tends to depress vital energy, impoverish the blood, and starve the nerve-centres. The symptoms *it is said*, seldom begin to appear within ten months or a year after first exposure to the causes. Its prevalence in certain districts seems to point to causes intensified in those localities. Its occurrence iu other intertropical countries, and even at sea, and its epidemic visitations—as recently in Bengal—suggest that it is to be classed among general rather than specific diseases; impaired nutrition, under certain peculiar circumsances, rather than any specific disease! Rankin thought it was a result of renal disease, but there is no evidence that I know of to show that it is so, or due to structural change in any of the viscera. Morehead considered that it might have a scorbutic origin. It is probable that malarious cachexia, when accompanied by exposure, privatiou, aud exhaustion of the vital powers, may have something to say to it.

The phenomena of beri-beri are those of anæmia and general dropsy: œdema and pain of the limbs and body generally, numbness, heaviness, loss of power, sometimes paralysis, dyspnœa, palpitation, irregular action of heart, anæmic cardiac murmurs, small quick pulse, dryness and heat of skin, appetite impaired, torpor of bowels; urine may be scanty and high-coloured, specific gravity 1020 to 1040, no albuminuria as a rule. According to Horton (Africa) and others, excessive drowsiness and stupor attend some stages of the disease. The tongue is pale and flabby, the mucous membranes are pallid, there is occasionally hæmorrhage from the stomach or bowels, petechial eruption, diarrhœa, an anxious expression of the countenance, which is puffy, swollen, and sometimes livid; a peculiar tottering gait.

The disease presents itself in the chronic and acute form; rarely, it is said, in either form until after exposure of some months to the exciting causes. I have described the general symptoms, and it remains only to say that it frequently assumes a lighter and modified form, with anæmia, numbness, a certain amount of pain in the limbs, anxious expression of countenance, disordered bowels, scanty urine, cold skin, and feeble irregular pulse, palpitations, nervous depression, puffy face and neck, or unsteady gait in walking. There is also in some of the cases a peculiar burning of the feet which is very distressing.

Malcolmson describes this condition in connexion with beri-beri, to which, he says, it is allied; it affects the soles of the feet, the calves of the legs, the back, and occasionally the muscles of the legs generally. Recent observers in India have mentioned it as occurring also in the upper extremities. It occurs in recent and slight examples of beri-beri, and appears to have been observed in the troops after the first Burmese war. It sometimes occurred in men who had not had other symptoms of beri-beri. Malcolmson thinks that it is not really rheumatism or beri-beri, and that it may accompany or follow other diseases, and is an indication of nervous debility.

The acute form of beri-beri has often very severe symptoms, and the rate of mortality from it is very high, second only to that from cholera. There is rapid general anæmia, and dropsy of cavities and areolar tissue, scanty urine, constipation, weak irregular pulse, intense præcordial pain, hurried irregular respiration, occasional vomiting, sometimes of blood, swelling of limbs, numbness, pain, paralysis, preceded by a feeble, tottering gait, pleuritic and pericardial effusion, and death, either from syncope or, as I should think, from cardiac or pulmonary embolism, in a few days. In this acute form, as I have said, it is very fatal, but in the milder and more chronic form recovery is frequent. Until the recent outbreaks in Bengal the disease had not received much notice in the sanitary reports; but I find in the Army Blue-book for 1871 notice of fifteen cases that occurred among native troops in Ceylon, and of seventy cases in the Ceylon Rifles in Labuan. No European deaths are recorded in the above period. The inference would be that the disease when it has occurred has been referred to anæmic dropsy. No post-mortem examinations, so far as I know, have been recorded during the late outbreak in Bengal, nor has any special examination been made of the blood or lymph. The recent discoveries in regard to the presence of certain micro-organisms in the fluids and tissues may not be without significance in this disease. In such records as I have seen of the morbid anatomy it would appear that there was general effusion of serous fluid in the areolar tissue and tissues generally. All were alike soaked with watery effusion, and were soft and degenerate; the muscular fibre fatty and feeble, especially the heart, which was often enlarged and dilated; kidneys softened, enlarged, and anæmic. But though hepatic, splenic, or renal complications may exist, intensify the severity, and hasten the progress of the general symptoms, they are not essential concomitants of the disease, but appear to origiuate in the spanæmic state of the blood, and to be kept up by its progressively imperfect elaboration. The resulting partial starvation of the cerebro-spinal centres and the consequent nutritive changes, sufficiently account for the paralysis which in some cases characterises the disease.

Prevention and Treatment.—Proper food, suitable clothing, and protection against vicissitudes of climate, wet and cold, tend to prevent; whilst faulty hygienic arrangements, bad and exhaustive habits, all tend to promote the development of the constitutional condition in which the disease commences. When the disease is established, all these precautions are still necessary, and the symptoms must be treated as they occur. Diuretics and diaphoretics to relieve the œdema and dropsy; tonics and stimulants to give vigour to the weakened muscular fibre; and food and remedies that may improve the condition of the blood.

In the more aggravated and acute cases the indications are the same, and remedies that are calculated to prevent exhaustion or the tendency to fatal syncope and embolism are indicated.

Acetate of potash, digitalis, and squill occasionally (very occasionally, I should say), combined with calomel, are said to favour the removal of the fluid (needless to say that the physiological effect of mercury is to be avoided); salines with the latter may at different stages be found useful.

The object being to remove the fluid and strengthen muscular fibre, iron and other tonics are needed. No treatment will be of much avail if the patient be not placed in favourable hygienic conditions. Among other remedies, Malcolmson speaks highly of two—treăk-farook, and oleum nigrum, procured originally at Masulipatam. They were considered to be very effective in the treatment, especially in relieving the œdema and dyspnœa, which it is said proved

very fatal until they were introduced. The treāk-farook is a black electuary, imported (says Waring) from Venice, and is the Theriaci Andromachi of old writers. It is used for other diseases besides beri-beri, such as rheumatism! Mr. Geddes first brought it into notice, and he employed it in combination with rhubarb, cinnamon, cloves, and honey; good food and milk being given at the same time. A similar mode of treatment is advocated by Malcolmson. The composition of the treāk is apparently unknown, but it seems to be stimulating, diuretic, and probably not aperient unless combined with rhubarb.

The oleum nigrum, which is also highly spoken of by Malcolmson and others, is prepared from the seeds of Celastrum nutans, combined with benzoin, cloves, mace, and nutmeg; it is stimulant and diaphoretic. Given three times a day, it is said to have been beneficial in several cases of beri-beri. There is, I should imagine, no good reason for supposing that these remedies have any specific action beyond the peculiar properties which they probably share with terebinthinates in stimulating capillary action.

No doubt both native and European physicians in India will be able to devise other remedies just as effective. Nux vomica has been found useful in certain cases, and opium may be needed to allay pain and irritability. Hepatic and splenic complications require appropriate remedies.

Obviously the indication is to promote removal of œdema, to regulate the functions of the abdominal viscera, increase the action of the skin, and to give tone and vigour to the muscular fibre, appropriate diet, eareful hygienic arrangements, change of locality, and such remedies generally as will tend to improve the condition of the blood. By such measures can we hope to deal snccessfully with this disease.

A CASE OF PAPILLARY GROWTHS IN THE COURSE OF NERVES.

By H. RADCLIFFE CROCKER, M.D.,
Physician to the Skin Department of University College Hospital.

Dr. Stephen Mackenzie's case of papillary growths of nervous distribution, published in the *Medical Times and Gazette* for April 24, recalls a case which I examined for Dr. Gowers at the National Hospital for Nervous Diseases, Queen-square. The boy, aged fifteen years, was suffering from pseudo-hypertrophic paralysis. The skin affection was limited to the left half of the body, and was most marked on the extensor surfaces.

The lesion consisted of an aggregation of light fawn-coloured lenticular masses, the largest one-twelfth of an inch in diameter; but some were mere dots. The raised part of each mass was made up of epithelium, which could be easily scraped off by the nail; and then the exposed part was slightly below the level of the sound skin, and with a lens could be seen to be granular, like the granulations of a wound on a small scale, but quite dry. These were evidently enlarged papillæ. The masses were grouped together in lines and irregular patches in the following situations:—At the back and upper part of the neck was a line extending for three inches straight downwards and just to the left of the median line. This was joined at its lower extremity by another line, one inch and a half long, extending obliquely upwards, and there was a small patch between these lines. Over the upper angle of the scapula was a patch the size of a shilling, and a line of it extended along the spine of the scapula. Three inches below the inferior angle of the scapula was a longitudinal patch in the line of the ribs; two small patches were situated on the front of the trunk, but not corresponding with the same rib-space as that behind. On the left arm on the outer and upper part of the elbow was a longitudinal patch extending from two inches above the elbow over the condyle and along the centre of the back of the arm, and then bearing towards the root of the thumb; it was less marked below than above, and the patch near the wrist was scarcely perceptible for one inch and a half. To the inner side of the above patches at the elbow was a line of the disease two inches and a half long, and a few solitary masses were present on the flexure of the joint. On the inner and back part of the left calf were some irregular patches also arranged in the length of the limb; while a small patch was situated in the left groin, and another to the left of the median line, over the thyroid cartilage. The lesion closely resembled, on a small scale, those cases of irregular and partial ichthyosis of which I recorded a well-marked case in the *Clinical Transactions* for 1879. Its arrangement having been strictly unilateral in the line of the ribs, and longitudinally as regards the limbs, suggests a nerve influence in its distribution. The condition is mentioned at page 9 of Dr. Gowers' work on Pseudo-Hypertrophic Paralysis, where the nervous aspect of the case is fully reported.

28, Welbeck-street, W.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

ST. THOMAS'S HOSPITAL.

CASES IN DR. BRISTOWE'S WARDS.

Abdominal Tumour of Uncertain Nature.

Wm. C., aged thirty-seven years, a reporter, was admitted on February 27, 1880, with a globular, fluctuating swelling of the abdomen, extending from the pubes to the umbilicus. There was no family or previous history of any importance bearing on his condition. As a lad he had always been healthy, but had suffered slightly with bronchitis every winter during the last fourteen years. Eighteen months before admission he began to be ill. He first complained of pains in the lower part of his back, and was very restless at nights; he used to get up and walk about then to relieve the pain. About the same time he passed very little water, although he says he had to try to make water frequently. He also suffered much from constipation. Later on, the pain in the back and lower part of the abdomen becoming excessive, he consulted a doctor, who advised him to go to St. Thomas's Hospital. He came under the care of Dr. Bristowe for the first time in February, 1879. At that time a swelling of the abdomen was tapped twice, and 106 ounces of fluid (of same kind as subsequently described) were removed at the second operation. In June, 1879, he left the hospital, the swelling being much reduced and his health improved. Early in July he returned to the hospital and the tumour was tapped for the third time; the swelling had then so increased that his breathing was considerably interfered with. After about a month's quiescence the tumour gradually increased in size, and in November, 1879, it was about as large as it had been when operated on in July. It had continued to be about the same size until February, perhaps increasing a little. On February 22 he vomited three or four times, and during that night and next day could not keep food down. With simple diet, however, this vomiting ceased. Lately (before admission) he has suffered as at first; he has had frequent pains across the back, and has been troubled with frequency of micturition and the passing of only small quantities of urine. He has also been very sleepless, and when asleep has been troubled with jerking of the right leg. There has been recently no difficulty of breathing, but constipation has been troublesome as usual.

On admission, patient was a dark-complexioned, emaciated man. The abdomen was enlarged as stated above, and on the right side, between the cyst and the abdominal wall, could be felt a small, tense, firm, freely movable tumour. The girth of the abdomen at the level of the umbilicus was thirty-three inches and three-quarters. During the next few days patient complained of increased feeling of distension, and of considerable tenderness on the left side of the abdomen. He had slightly troublesome cough with expectoration.

March 5.—The aspirator was used, and 167 ounces of coffee-brown coloured fluid were drawn off. The circumference at the level of the umbilicus was reduced to thirty inches and a quarter, and his general condition subsequently rather improved.

30th.—It was noted that he had gained two pounds and three-quarters in weight. The swelling afterwards slowly increased.

May 13.—Mr. Sydney Jones made an examination by the rectum and bladder. The latter organ was found to be

turned towards the right side, it being difficult or impossible to pass the sound into it in the median line. The hand passed into the rectum felt a tumour projecting into the gut, semi-elastic and with two or more hard nodules on its surface.

On June 4 the tumour was again tapped, and seventy-two ounces of fluid were removed.

Throughout the case the temperature has generally been subnormal, once or twice rising above normal. The other organs presented nothing noteworthy. The urine kept scanty, and micturition was frequently painful. On June 1 it was noted that there was a slight trace of pus and albumen in the urine passed.

In commenting on this case, Dr. Bristowe said that his previous experience gave him no clue as to the exact nature of the growth. It had come in a situation and had characters which, if the patient had been a woman, would have suggested ovarian disease. The idea of removing the tumour had occurred to him, but the result of the examination by Mr. Sydney Jones showed that the connexions of the growth with the rectum and bladder would make an operation for that purpose of very doubtful propriety. Some years ago he had had a man under his care with a somewhat similar swelling, commencing in the splenic region, and containing not less than two gallons of grumous fluid, which, after two tappings, was permanently cured. He had seen that patient twelve years afterwards, and he was then quite well. There was no evidence in either case that the tumour was hydatid. The present case was one to be carefully watched and the future result noted.

Locomotor Ataxy in a Woman.

Rebecca T., aged thirty-nine years, was admitted on June 3. Her mother was alive and well; her father died by some accident. She had one brother, who was said to have softening of the brain. Patient herself said she always had good health up to about three years ago, when she had "sciatica," which had kept troubling her off and on to date of admission. She had never had any attack of rheumatism, nor any symptoms of nervous disturbance except her present illness. Three years ago she stated that she woke up one morning and found her left leg numb, and when she got out of bed she could only walk with the help of a stick. There was no loss of sensibility in the limb, but she very soon got tired when walking or standing. This condition lasted nearly a year, when she got quite well, and remained so until October, 1879. She then noticed that she got a very tired feeling in her left leg after any exertion. This was followed in a week or so by some numbness and loss of power, and she went under medical treatment at various hospitals in London. Whilst under treatment she stated that at first the left leg got well and the right became bad, with the same numbness and loss of power, but with the addition of a tight feeling round the toes, legs, and waist, as if cords were tied round these places. For some time she attended as an out-patient, and was able to walk to and from the hospital with a little assistance, but, on the whole, she gradually got worse. The arms were never affected. She also began to suffer from frequent twitchings of the muscles of the legs and of the abdomen. There was no history of hysteria.

On admission, patient was a well-nourished woman of somewhat florid complexion. She complained of partial loss of power and sensation in the lower extremities, and of frequent creeping sensations in the limbs and back. She had never noticed that she stumbled about in the dark, but had felt as if there was a pad of cotton-wool between her feet and the ground when she walked. On making her walk she was found to require assistance, and there was very marked loss of co-ordination of the muscles of the legs. On trying to stand with her eyes shut she immediately lost her balance, and had to be saved from falling. The patellar reflex was entirely absent on both sides. The lower limbs were fairly well nourished, but the muscles were soft and flabby, those of the right side especially. When lying in bed patient stated that, as a rule, she felt as if there was little the matter with her. No affection of any of the joints could be made out.

Disseminated Sclerosis.

Rose R., a woman about forty years of age, was admitted on April 3. There was no family history of nervous disease, and patient had been a fairly healthy woman. Three years before admission her husband died suddenly, and she had a miscarriage of a four-months child six weeks afterwards. No specific history was made out. She had always been temperate, and never had, until her present illness, any nervous trouble. Fifteen months ago (from April 3) she noticed that when in bed her legs felt cold; she had an attack of vomiting and sickness, and from that time she seemed to lose her health. Her legs began to feel weak, and she complained of vertigo frequently. Her memory began to fail and her speech became faulty. She then kept altogether indoors and did not attempt to do much work. Before admission she began to suffer a good deal with headache, and had often violent pains down the back, but not in the legs. She had "creeping" sensations in the legs, and the hands and feet were numb. The bowels were very irregular.

On admission, patient was a somewhat spare woman. When she moved, tremors affecting the whole body were very noticeable, but when at rest the movements ceased. The tremors were more marked in the legs than in the arms, but when a tumbler of water was given to her to carry to her mouth, the movements became very violent and the contents of the tumbler were spilt. There was scarcely any trembling of the facial muscles, but when she stood up the shaking of the head was very evident. Her enunciation was weak and halting, and she was very conscious of this, saying that she spoke just like a drunken man. The lips and tongue were slightly tremulous. On standing up the tremors were very violent, and she had to be supported. In walking (which she could only do with assistance) there was a tendency in the legs to stiffen and to perform jerky movements. She stated that she frequently felt giddy, and had often fallen when attempting to walk. The giddiness usually came on quite suddenly, and she then fell at once if not supported; there was no constant direction in which she fell. There was no anæsthesia. The patellar reflex was much exaggerated on both sides. There was no apparent atrophy in any special region, but patient had grown thinner since the commencement of the disease. For some time she had been troubled with incontinence of urine and constant desire to micturate. The memory and mental faculties, as far as could be judged, seemed to be quite normal. In speaking, she pronounced her words slowly and with great care and precision, but often slurred over words. Constipation was troublesome. While under treatment the incontinence of urine became less. Nux vomica and later on nitrate of silver were given; and the case is still under care, the symptoms on the whole being about the same as on admission.

Epilepsy, brought on by Fright.

Helen G., aged eighteen years, was admitted on May 29. She had lived for about six years in Chatham, and had always been in a bad state of health there. She suffered every winter from cough, and at times brought up a deal of blood. She also frequently lost her voice, sometimes for two or three weeks. When thirteen years of age she had small-pox, but had had no other serious disease. Her father and mother were alive and healthy, and there seemed to be no hereditary tendency to epilepsy. Two years before admission she was very much frightened by an escaped prisoner breaking into the house she was living in. On the day following she had the first fit, falling down unconscious, and foaming at the mouth. The fit lasted about half an hour, she thought, and she was drowsy for some time afterwards. There was no incontinence of urine or fæces. Six months afterwards she had another fit, and then the attacks came on more frequently, when she began to attend a hospital as an out-patient and improved somewhat. On Easter Monday she had a fit, and since then the attacks had been very frequent. During the three weeks preceding admission here she had fits every day, sometimes three or four in twenty-four hours. While under notice in the hospital she had several fits of the ordinary epileptic type. On one occasion the attack seemed to have been brought on by seeing the body of a patient removed from the ward. The fits were usually preceded by some warning; she felt a peculiar sensation in her feet, especially the left, and this travelled towards the head and neck. When it reached the neck, she stated, her arms were convulsed, and when it came to her head she fell down. In appearance patient was a delicate, slightly-made girl, not apparently in bad health. As far as could be made out from her history, the fright two years ago was the determining cause of her illness.

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Medical Times and Gazette.

SATURDAY, JUNE 12, 1880.

NURSING AT GUY'S HOSPITAL.

The nursing crisis at Guy's Hospital continues, necessarily, to attract considerable attention; and the current number of the *Nineteenth Century* contains three articles on "Doctors and Nurses," written respectively by Dr. Octavius Sturges, Dr. Seymour J. Sharkey, and Miss Margaret Lonsdale. The last is meant to be a reply, we suppose, to the articles that appeared in the *Nineteenth Century* and the *Contemporary Review*, in May, on Miss Lonsdale's notorious paper that appeared in the first-named journal in April. Miss Lonsdale observes that it is difficult for people whose interest has been keen upon a subject for many years, or who have taken a more or less active part in the furtherance of a cause which they have deeply at heart, to always measure their ideas, and the language in which they clothe them, "as dispassionately and temperately as is usually expected of them by onlookers and outsiders." She is, she says, in the position of these interested people; and as "it seems possible" that on one point mentioned in her article in the *Nineteenth Century* she may have given unnecessary and unintentional cause of offence to the doctors, she feels bound to make them honourable amends. And then she says, "I regret that I allowed my strong feeling in the matter upon which I wrote to cause me to use language which imputed unworthy motives to the medical men who support the old system of nursing in opposition to the new." This is all that Miss Lonsdale has to say on this point, and we suppose we must give her credit for meaning to make an apology. But the *naïveté* of her "it seems possible" must seem delicious to those who recollect, among other things, her more than mere suggestion that hospital medical men indulged in and permitted members of medical schools to indulge in such practices and experiments as had better not be mentioned outside the hospital walls, and therefore preferred to have as nurses women of such character that little credence could be given to their word. Besides, there is her very plain statement, "The presence of refined, intelligent women in the wards imposes a kind of moral restraint upon the words and ways of both doctors and students, which some of them desire to get rid of, and I have no hesitation in saying that it is against this, as much as anything else, that they are now, at Guy's Hospital, resisting with all the might they possess." It is evident that Miss Lonsdale has very peculiar ideas as to the meaning and force of language, and in this lies her real excuse. In this light it may be understood how it is that she can declare she hoped she had made it "clear beyond the shadow of a doubt that a doctor is in all ways, and at all times and seasons, the master and controller of both nurse and patient"; and how it comes that she is astonished to find that she is "universally credited with having made the *monstrous* assertion that in some ways the nurse knows better than the doctor what is good for the patient." Writing on this subject, Miss Lonsdale said that medical men were easily blinded as to the merits of nursing, and that when allowed to see clearly it did not at all follow that they would be able to distinguish good from bad nursing; and she added, "a doctor is no more necessarily a judge of the details of nursing, than a nurse is acquainted with the properties and effects of the administration of certain drugs." She now tries to explain this away in the following manner:—"The details of nursing, to which I referred, are really such very small details that, except that nothing is small when the comfort of a patient is concerned, I should forbear to mention them. Suppose a doctor came round and said to a nurse, 'Such a patient is not to be moved,' the nurse would not answer, 'How, then, am I to change his sheets, which constantly require changing?' If she did, the doctor might reasonably reply, 'That is your business: I tell you simply I will not have the man moved.' In this and a thousand other little ways, small, no doubt, but of infinite importance to the comfort and well-being of the patient, the nurse's and not the doctor's ingenuity is taxed. Notably, this is the case in the prevention of bed-sores, a vexed question, into which I will not enter further than to say that doctors have to deal with the cure of such sores, while they leave the prevention of them solely to the nurse." Sir William Gull called the original assertion "preposterous and absurd": this statement is to the full as bad. A doctor looks very sharply to the prevention of bed-sores, and knows full well how they ought to be prevented; he would also note very quickly if a nurse did not know how to change sheets, etc., with the least possible disturbance to a patient, and if he found her wanting in the knowledge he would have the right to expect her to possess, he would, if no other more skilled nurse was available, teach her her work. But we have had enough of Miss Lonsdale. We are glad to read her acknowledgment that "Unless the responsibility of life or death be shifted from the doctor's shoulders to those of the nurse, which cannot be for a single moment contemplated, the doctor must remain absolutely supreme"; and to acknowledge that her second article is written in altogether a much more temperate tone than the first one. It must be remembered in the future that Miss Lonsdale's writings do not mean what they apparently say,—and, after all, it is something to have learnt this from her second article in the *Nineteenth Century*. The dust and noise consequent on her deplorable article No. 1 have, however, led to the danger that the main points at issue at Guy's may be overlooked or forgotten; and we shall therefore take, in noticing the articles written by Dr. Sturges and Dr. Sharkey, an early opportunity of returning to the real matter in question.

PERITONEAL SURGERY.

The same number of this journal as that which contains, under the heading of "Abdominal Surgery," an article on the recent work and writings of Professor von Nussbaum, also contains a report of the last meeting of the Medico-Chirurgical Society of London. If some of the marble busts which adorn the room of meeting in Berners-street could speak the sentiments, as well as represent the features, of the great masters of our science, they would not only fully endorse the sentence with which the article on "Abdominal Surgery" closes, but use some stronger words of caution.

The surgery of the last twenty years has been gradually but surely proving that the peritoneum will bear an immense amount of rough handling, cutting, and carving, without disastrous consequences, always provided that due care is exercised in performing operations which involve it. Scrupulous cleanliness, and avoidance as far as possible of external sources of infection, have yielded, especially in our own country, results of which surgery may be justly proud. But, while we have thus been learning how much the peritoneum will endure with due precautions, we must be blind indeed if we have not also learnt that it is swift to resent reckless procedure or contamination from without. During the last two or three years there has been a steadily increasing faith that, grand as the advances in peritoneal surgery have been, they are likely to be still grander in the future in consequence of the application of Lister's method. The leaders in surgery in Great Britain, in America, and on the Continent, have nearly all proclaimed their adhesion to the doctrine that, whatever is or is not necessary in general surgery, facts have shown that a strict adhesion to Listerism is advisable in great peritoneal operations.

With the knowledge we now possess as to what the peritoneum will tolerate with ordinary care and cleanliness, and what additional safety strict Listerism affords, we are prepared to welcome steady advances in this department of surgery; but when it is gravely proposed to perform such a serious operation as abdominal section for the cure of such a comparatively common complaint as "pelvic suppuration," it behoves us to examine carefully the arguments adduced in favour of this heroic treatment, especially when the operator boldly avows his disregard for Listerism, though two-thirds of the small number of cases he brings forward were, he *thinks*, operated upon by Lister's method, and treated by that method during the few first and most dangerous days after operation. Surgeons who have seen much of pelvic abscess know that it is a tedious and difficult complaint to treat, and that many patients become more or less permanent invalids from fistulous communications forming between the abscess-cavity and the bowel, bladder, or vagina; but they also know that, if the suppuration is diagnosed in time, and treated, as other abscesses are treated, by free evacuation and careful attention to after-drainage, good results are obtained.

Two main causes are instrumental in leaving a certain proportion of the cases the subjects of these troublesome fistulæ. First, the dread patients have of surgical treatment in the earlier stages; and second, the inability of the medical attendant to make sufficiently early a correct differential diagnosis, or the fear so many have of boldly treating an abscess in the pelvis as they would at once treat an abscess elsewhere.

But are patients more likely to present themselves for early treatment, if so formidable an operation as abdominal section is likely to be proposed to them; or are surgeons, generally, likely to adopt an operation which, before the introduction of Lister's method, claimed, even in experienced hands, a mortality of over 20 per cent., and even now, in the hands of those who follow Lister most carefully, cannot claim as an average result to escape with less than 10 per cent. of deaths? That exceptional cases may be found, in which it may be the best plan to open the abscess *with antiseptic precautions* in the abdomen, we do not deny; but, even in these cases, it will not as a rule be necessary to open the peritoneum. We trust that Mr. Lawson Tait will be able to bring forward some more cogent arguments than those he adduced in the very brief notes of "Six Cases of Pelvic Suppuration treated by Abdominal Section and Drainage," in support of so dangerous and novel a proceeding. In avowedly discarding Lister's method, he loses the support which the decreased mortality it has caused might have afforded him; but even with the lowest estimate of the mortality of abdominal section, we doubt if the profession will be prepared to accept such an operation as a justifiable method for the treatment of pelvic abscess in any but very exceptional cases. We must not forget that the after-results of abdominal section are not always satisfactory, and may name ventral hernia and obstructed intestine from adhesions as not impossible results. Surely even a fistula is preferable to either.

In short, the opening of pelvic suppurations by abdominal section should be confined to those cases in which the collection is so large that it can be opened without a double passage through the peritoneum.

THE ECONOMICS OF THE CALCUTTA HOSPITALS.

[THIRD NOTICE.]

"*Vires acquirit eundo*" is, we regret to find, a motto which is painfully applicable to the dispute regarding diets in the Calcutta Hospitals, upon which we have already found occasion to animadvert twice(a) during the last twelve months. The, in itself, very urgent and very plain question—What daily rates are sufficient to pay for the diets of a European and a native patient? which, in the interests both of the sick and of the Government exchequer, ought to have been decided in a month, and which would, we are confident, have been thus placed speedily and finally at rest had it been mooted five years ago, has been kept in active but unprogressive agitation since February 18, 1878, when the Lieutenant-Governor appointed a Committee, uncontrolled by the very able Head of the Medical Department, whose authority the Government ignored, to inquire into this subject. The matter, having now been under stormy debate for two years and four months, appears to be further from adjustment to-day than it was at first. Hence there has long been present, in cool and practical minds, the question—Does there not exist, either in India or in Westminster, some power capable of intervening and of deciding this question with dispassionate authority? Masses of documents upon this subject have come before us since the appearance of our leader in January. Among the most important of these papers is a letter published by the Government, dated May 29, 1879, in which Dr. David Boyes Smith, whom we regret to have to designate as the "late" Principal of the Medical College, reviews and defends the diet system of that Hospital in former years with so much effect that, in his resolution thereupon, dated June 18, 1879, the Lieutenant-Governor remarks that "he does not think it necessary . . . . to enter on any further discussion on the past administration of the Medical College Hospital." We have then a Calcutta Government Gazette, dated February 25 last, in which the Lieutenant-Governor publishes and reviews letters, explanatory of their administration, which, having been invited by the Government, have been submitted by two

(a) *Medical Times and Gazette*, May 31, 1879, and January 24 of the present year.

retired Deputy Surgeons-General, the late Principal of the Medical College Hospital, and the Superintendent of the General Hospital. The manner and temper in which the arguments of these officers are dealt with may be judged by the facts that, when the latter officer proceeds to account for the increased expenditure (Government designates it "gross waste") of his medicines, he is accused of "simple impertinence"; and that the former gentleman is taxed with want of common sense and with writing a "misleading paragraph," when, in noticing the Committee's recommendation that "two indents should be allowed instead of one. The first should be estimated to be sufficient for six months; at the end of that time efforts should be made to utilise the drugs remaining by substituting prescriptions containing them, for other formulæ"—he remarks, "The intelligence which evolved this plan would, it is to be feared, unblushingly offer a patient an orange as his dessert to-day, upon condition of receiving the peel at his post-prandial refection to-morrow."

We have next a statement, published in our issue of February 14 last, in which Surgeon-General James Irving, whom the Lieutenant-Governor ordered, as being then Principal Medical Officer, to inaugurate his new dietary (or, as Dr. Irving terms it, to "apply the screw"), argues that economy "is now being carried to extremes in Calcutta"; and states that, on visiting the Campbell Hospital, "in which the mortality is so high, one day in the spring of 1878, he found that there were upwards of 350 patients, of whom over thirty were returned as moribund—that is, expected to die a short time after admission—and that, for all these 350 patients, some five or six ounces of rum and about eighteen or twenty pints of milk were issued, besides a few ounces of mutton, and these were the only extras of the day." He adds—"The assistant-surgeons, I afterwards discovered, were afraid to order stimulants, knowing that the authorities objected to extras." These, it must be repeated, are facts stated by the able and experienced officer who was then the highest medical authority in Bengal. A similar communication, dated February 7 last, was also sent by Dr. Irving to the Calcutta *Englishman*. In this Dr. Irving shows that, during ten days in April and May, 1878, the Campbell Hospital had a daily sick-list of from 342 to 385 in-patients, of whom there were daily from twenty-eight to thirty-four moribund cases; and that, during these ten days, the quantities of stimulants and extras issued to this great body of sick and dying amounted, in the gross, to 122 ounces of rum, 268½ pints of milk, 250 ounces of mutton, three fowls, and six eggs.

The reply of Dr. Payne, now Surgeon-General of Bengal, and late senior medical member of the Committee on Hospital Diets, to Dr. Irving's statements, is published in the Calcutta *Statesman* of April 8 last. Dr. Payne's argument is so noteworthy, and so very singular in its ingenuity, that we shall cite it in full. Dr. Payne says that Dr. Irving

"produces a table of figures to show that on certain days in 1878, at the Campbell Hospital, the quantity of stimulants and dietary extras was too small for the wants of the patients. For this purpose he gives daily numbers of moribund persons, which yield an average of thirty-two, and the daily expenditure of rum and milk, etc.; and he adds—'The above seems to require no remark.'

"Dr. Irving's figures are so obviously incorrect, that they might indeed be dismissed without remark. He has found that there were thirty-two moribund persons in this Hospital on each of ten consecutive days. A moribund person, as the term is used here, and by Dr. Irving, means one who dies within twenty-four hours of admission. Consequently, to maintain a living average of thirty-two such persons daily, the same number must be admitted daily. The time of year was not the time of greatest sickness, and the number of moribunds then admitted was below, rather than above, the ordinary number. If Dr. Irving's figures were true, the number of moribunds, and of course the number of deaths, in 1878, would have exceeded by some hundreds the total number of cases of all kinds treated in the Hospital.

"Dr. Mackenzie's records show that, as a matter of fact, during the periods stated there were only four persons in the ward who died within twenty-four hours of admission, and that the total number of deaths in the ward in those ten days was eighteen, a number which Dr. Irving would magnify into 322, that is, the total number of his moribund persons.

"The manner in which Dr. Irving fell into so strange an error seems to be this: He visited the temporary ward, sometimes called moribund ward, a separate building in which a variety of cases are kept for a time, and into which moribund persons among others are conveyed on admission. He regards all the occupants of this ward as moribund, though the register would have shown him that a large proportion of them recovered. Finding in the books a period during which the consumption of stimulants has been small, he, without further inquiry, compares the daily number of occupants of the temporary ward, calls them all moribund, and believes that he has proved to demonstration the insufficiency of treatment."

Upon the above we shall state plainly that, how far this line of argument by Dr. Payne, who is a very clever and earnest officer, but not always, it would appear, a close and infallible reasoner, may suffice to convince the Lieutenant-Governor, who, although not yet accepted as a leading authority on dietetics, is undoubtedly an able ruler, solicitous to introduce practical and humane reform, we know not: but we are confident of this, that no other physician, in India or elsewhere, will agree with Dr. Payne that he who is moribund inevitably dies within twenty-four hours; or that, while he is moribund "who dies within twenty-four hours of admission," he is not moribund who dies in twenty-four hours and five minutes after admission; or that a body of patients averaging between three and four hundred daily, who had in ten days, as Dr. Payne admits, eighteen deaths in one ward, the daily sick in which averaged thirty-two (to say nothing of the deaths which probably occurred in all the other wards), were adequately supplied by the quantities of extras and stimulants which Surgeon-General Irving has tabulated, which we have cited, and which Dr. Payne does not attempt to gainsay.

The Calcutta papers state that, under the continued advances of the "screw" system, Dr. David Boyes Smith, Principal of the Medical College Hospital, an excellent officer, has resigned his appointment, the monthly pay of which is said to be £180. The circumstances attending this painful occurrence, although they have become the subject of unconfirmed rumours, have not yet been made public; but, as they cannot well remain hidden much longer, and as they will probably throw considerable light upon this much-vexed question, we shall pause in our commentary while expecting to learn them; suspending, in the meantime, a few remarks which we have to make upon the clever letter by "A Member of the Committee," which appeared in our issue of the 22nd ult.

THE WEEK.

TOPICS OF THE DAY.

At a time when the subject of the London water-supply of the future is occupying such general attention, and more than one suggestion has been made for seeking supplies from other sources than those at present available, it may not be out of place to mention that at Wokingham a deep well has been sunk through the same formation as that on which London stands. The proceedings were commenced by a company in 1878, they being advised by their engineer that, probably, chalk might be reached at a depth of about 350 ft., and water obtained at about 400 ft. The result confirmed these anticipations, the chalk having been reached at a depth of 345 ft., and a very fine chalk spring struck at 405 ft.

The spring yields at the rate of about 360,000 gallons a day, and fills the well-shaft to within some seventy feet from the top. The water is stated to be very pure and clear, and the discovery will enable the company to supply a large range of surrounding country. The formations passed through are the London clays and the Reading sands; the water in the chalk is supposed to be derived from the chalk-hills to the north of Twyford. It will now be pumped to a high-level reservoir situated half-way between Wokingham and Bracknell, and the company intend to give a constant service to their customers. But even if it were already known that such a source of water-supply might be available for London, there are many important questions to be considered, such as the probability or non-probability of the supply being continuous, and the fate of the suburban districts whose water-supply might be drained off by these chalk wells.

At the last week's meeting of the Metropolitan Board of Works, the Works and General Purposes Committee reported with reference to the memorial of the Duke of Westminster and the Kyrle Society, praying the Board to take steps for rendering the open space of Lincoln's-inn-fields available for the public use and enjoyment, and the memorials of the St. Giles's District Board and others in opposition to the proposal, that, having carefully considered all the circumstances, and ascertained that the right to throw open the fields could not be acquired without a special Act of Parliament, they were of opinion that it is not expedient for the Board to take any steps in the matter. A discussion followed the presentation of the report, in the course of which an opinion was expressed that the consideration given to the subject by the Committee was insufficient, nevertheless their recommendation was ultimately agreed to.

The Duke and Duchess of Connaught last week visited the North-Eastern Hospital for Sick Children, in the Hackney-road, when her Royal Highness declared the new wards open. The work of the Hospital, as regards in-patients, has, up to the present time, been carried on in two old houses, ill suited for the requirements of a hospital, and now about to be superseded by the new wards. The cost of the construction of the new wards has been about £8500, of which a balance of about £2000 remains to be paid. Dr. Sansom and Dr. Cayley had the honour of conducting the Royal party through the wards, and at the conclusion of the visit it was announced that the Duchess had signified her intention of giving a cot to the ward which is to be called the Connaught ward.

Some interesting records of the exceptionally dreary weather of the past year are afforded by Mr. Glaisher's report in the last return of the Registrar-General. He states that the mean temperature of the fifteen months ended January, 1880, was 44°. We have to go back to the years 1813-15 for a similar cold period, and still further back to the years 1783-85 for one of somewhat lower temperature; but in the year 1814 both May and December were more than two degrees above their averages, and in 1784 the month of May was four degrees above its average, September was one degree above, and January, 1785, was nearly half a degree in excess of its average. Therefore there is no instance, as far back as we can go, of fifteen months in succession, every one being below its average.

At the Guildhall Police-court, last week, a general dealer, of Mudford, near Yeovil, was summoned by one of the inspectors of the Metropolitan Meat Market for sending for sale as human food a cow's carcase which was diseased and unfit for the food of man. It was stated that the cow had died on a farm near where the defendant lived, and he bought it for £1 and sent it to London for sale. The inspector said that on April 16 his attention was called to four quarters of beef which were very wet and inflamed; they were decidedly unfit for human food, and he brought them to that Court, where they were condemned. Witness had never seized any of defendant's meat before. The defendant did not deny having sent up the meat, but pleaded that he thought it was good or he would not have despatched it. Sir Thomas Dakin remarked that he considered it his duty to send the defendant to prison for one month without the option of a fine. As sufficient warning has now been given, it cannot be argued that this decision will take anyone by surprise, and it is to be hoped that we have now reached the time when offences of this nature will no longer be allowed to be condoned by the infliction of a fine.

It was officially reported at a recent meeting of the Brighton Town Council that the Local Government Board refuse to sanction the Corporation borrowing £5000 for the purchase of a site for a sanatorium, unless they agree to fence it in and keep it solely for the purposes proposed. Three acres is the extent of land required; but, owing to a difficulty in arranging with the present owner for the portion necessary, the Council have agreed to purchase the whole of the property (about ten acres), intending to sell what they do not require. After a long discussion it was ultimately agreed to request the Local Government Board to receive a deputation on the matter.

The Marquis of Hartington last week received a deputation at the India Office from the Indian Medical Service Defence Committee, who were anxious to bring to notice the deteriorating effects on the prospects and positions of the officers in this Service which had resulted from the recent orders promulgated by the Government of India. Dr. Lyon Playfair, M.P., introduced the deputation, and pointed out that the Indian Medical Service had been one for which, up to the present time, the best medical students in this country had competed; and it was to be feared that the changes sought to be introduced would have the effect of preventing the best candidates from coming forward, so that both the public service and the public of India would be likely to suffer. Dr. Ewart explained that by these orders the Service was practically divided into a civil and a military branch, the latter being altogether subordinated to the Army Medical Department. This subordination was effected by placing the whole military medical staff under a surgeon-general to be chosen from the British service, at the same time making great reductions in the number of Indian administrative appointments. It would render the attainment of honorary distinction in the field an impossibility for Indian medical officers, who would be excluded from all prominent administrative posts in future campaigns. After alluding to certain other grievances, he concluded by asking for a Royal Commission of inquiry. The Marquis of Hartington said he was sure no Government would desire to do anything that would tend to lower the status of the Indian Medical Service. With regard to the reorganisation of the two medical services in India, it was admitted that such a step was necessary, and that a double military administration could not, with advantage to the service, be any longer retained. He understood, however, that several memorials on the subject had been presented by the medical profession, which were now under the consideration of the Indian Government, and they would soon receive the attention of the new Governor-General. He could not take any steps as to altering any of the decisions come to, until he had the views of the Indian Government on the subject. He would inform the Viceroy that he had received an important and influential deputation, not only representing members of the Indian Medical Service, but of the medical profession in this

country generally. If it should seem hereafter that further inquiry was necessary he would be ready to give the suggestion his attentive consideration. Later on he would confer with Dr. Lyon Playfair, Mr. Cowen, M.P., and others, on the subject.

On Saturday last the managers of the Metropolitan Asylums District officially inspected the Darenth Schools and Asylum for Imbeciles. Sir Edmund Hay Currie, the chairman of the Committee of Management, conducted the members of the Board round the Asylum, accompanied by the Medical Superintendent, Mr. Fletcher Beach. In the schools some of the imbecile children were put through exercises indicative of great improvement in their condition. The visitors expressed themselves struck with the results achieved by patient training in the higher classes, which, under the control of Miss Stephens, evinced a steady and marked improvement.

After an inquiry extending over seven weeks, the cost of which is estimated at £30,000, the Local Government Board has refused to sanction the scheme propounded by the Lower Thames Valley Main Sewerage Board for the disposal of the sewage of their district by a system of irrigation at Molesey. A provisional order has, however, been made extending for three years the time allowed to the Board for the diversion of the sewage from the Thames. Thirty thousand pounds is said to be equivalent to a rate of one shilling in the pound in the urban districts, and of very much more in the rural districts, and this sum has been expended without result; meanwhile the whole question has to be considered anew. It must be confessed that there are some things which, in this country, we do not manage cleverly.

In view of the appointment of the Select Committee upon the London Water-Supply Bill, the Metropolitan Board of Works have retained Mr. Philbrick, Q.C., Mr. Pembroke Stephens, and Mr. Bazalgette as counsel on behalf of the ratepayers of London. The water companies have agreed among themselves to be represented simply as one body, and not in each of their individual interests, and counsel have already been instructed to this extent. The Court of Common Council have also resolved to appoint a committee of twelve members to consider the question of the metropolis water-supply, with power to take such part as they may think expedient in the inquiry which is to be held.

ADDRESSES OF WELCOME TO HIS EXCELLENCY THE LORD-LIEUTENANT OF IRELAND.

On Monday and Tuesday of this week various public bodies sent deputations to Dublin Castle to present addresses of welcome to his Excellency Earl Cowper, K.G., on his arrival in Ireland as her Majesty's Viceroy. On Monday the University of Dublin and the College of Physicians, and on Tuesday the Royal College of Surgeons, waited on his Excellency. At the reception of the King and Queen's College of Physicians, the President, Dr. Head, read a loyal address, in reply to which the Lord-Lieutenant said they had given him a most cordial welcome and presented him with a most gratifying address. He hoped their College, which had now existed for 200 years, might continue for centuries longer to exercise the same beneficent influence it had up to the present. In reference to the important subject of the public health, they laid just stress on the expediency of securing for the public service practitioners well versed in the subject of sanitary science. To obtain the assistance of the men they seemed to have in view, free from prejudice and ready to grudge neither time nor trouble, was a matter of the very highest importance. For many years to come there would be a large field for the exertions of such men; and it was to institutions such as theirs they must look to secure them.

THE ELECTION OF THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS.

The time for nominating candidates for the four vacant seats in the Council of the Royal College of Surgeons expired on Monday last, when the following Fellows of the College, taking them according to seniority of Fellowship, had been duly nominated, viz.:—Messrs. William Cadge, Norwich, Surgeon to the Norfolk and Norwich Hospital—Fellow, August 10, 1848; William Adams, Surgeon to the Great Northern Hospital—April 10, 1851; Joseph Lister, F.R.S., Surgeon to King's College Hospital—December 9, 1852; Thomas Bryant, Surgeon to Guy's Hospital—May 12, 1853; Sydney Jones, Surgeon to St. Thomas's Hospital—December 11, 1856; J. Whitaker Hulke, F.R.S., Surgeon to the Middlesex Hospital—May 23, 1857; Thomas Smith, Surgeon to St. Bartholomew's Hospital—June 10, 1858; Mr. Berkeley Hill, Surgeon to University College Hospital—November 24, 1859; and Reginald Harrison, Surgeon to the Liverpool Royal Infirmary—December 13, 1866. The candidates are all Fellows of the College by examination. The election will take place, as usual, in the Library of the College on Thursday, July 1, at two o'clock.

THE LONDON WATER-SUPPLY.

On Monday evening last the House of Commons agreed, on the motion of Sir William Harcourt, to the appointment of a Select Committee on the London water-supply. The Committee consists of seventeen members—viz., Sir William Harcourt, Sir James M'Garel Hogg, Mr. Chamberlain, Sir Richard Cross, Mr. Alderman Lawrence, Mr. Bland, Mr. Pemberton, Mr. Caine, Baron H. de Worms, Mr. Firth, Sir Gabriel Goldney, Lord George Hamilton, Professor Thorold Rogers, Mr. Sclater-Booth, Mr. John Holms, Mr. Parnell, and Mr. J. G. Hubbard; and the Corporation of London, the Metropolitan Board of Works, and the London water companies are to be heard before the Committee by counsel. The reference to the Committee is in the following terms:—"To inquire and report as to the expedieney of acquiring, on behalf of the inhabitants of London, the undertakings of the existing metropolitan water companies; and also to examine and report whether certain agreements or any of them already entered into provisionally for the purchase of these companies would furnish a satisfactory basis for such an organisation; and, further, to inquire and report as to the nature and extent of the powers of the water companies to levy water-rates and rents, and how far it may be desirable to modify the same." It must be admitted that the scope of this reference is very large; but it does not express—at least, not distinctly—by any means the whole extent of the question before the Committee. For the Home Secretary has declared that he would not be a party to any inquiry unless it was left open to investigation whether some alternative scheme might not be preferable to that of purchasing the existing companies, whether London should be supplied from the Thames at all, and whether a better, purer, and cheaper supply could not be obtained elsewhere. Thus a very much larger question is now placed before Parliament and the public than was raised by the Bill of Sir Richard Cross, or than was at first intended by the present Home Secretary. Sir William Harcourt at first spoke of an inquiry of "moderate compass, so as to be disposed of during the present session"; and even so lately as when he received the deputation from the Board of Works, he was of opinion that it was not desirable to embark on an inquiry of a protracted character. All this caution, all his desire "not to hang up the matter indefinitely," has been flung to the winds. It would be difficult to institute an inquiry more likely to be of "a protracted character" than one into the possibility and advisability of obtaining

an abundant and constant supply of pure water for London from an entirely new source. At least three schemes for this purpose have been already suggested, we think—one for bringing water from Cumberland, one from Wales, and one for obtaining it from wells sunk into the chalk at various distances from London. About the feasibility or the probable cost of any one of these schemes next to nothing is at present known, and about that last named no certain knowledge could be obtained, except by very costly experiments. It needed not the wisdom and acumen of a Sir William Harcourt to tell the public that the existing companies have not an inalienable monopoly in the supply of London with water; but we confess to regarding with something like dismay his readiness to embark on an inquiry into new sources of supply, and the light-heartedness with which he suggests that the Metropolitan Board of Works, in conjunction with other great bodies, like the Corporation of London, may bring into London an aqueduct worthy of Imperial Rome, to supply our metropolis with water.

THE LATE MR. BRADLEY.

At a meeting of the Manchester Medical Socicty, on June 2, the President alluded in feeling terms to the lamented death of Mr. Bradley, which had occurred since last meeting, and proposed—"That this Society has heard with the most unfeigned sorrow of the sudden death of Mr. S. M. Bradley, whose loss will be keenly felt, not only by the Society to whose interests he was warmly attached, and to the debates at which his sparkling eloquence always made him a welcome contributor, but also by the whole profession, of which he was acknowledged to be one of the brightest ornaments." This resolution was seconded by Dr. William Roberts, and supported by Mr. Whitehead (representing the surgical staff of the Royal Infirmary, the senior members of which were, to their great regret, unavoidably prevented from being present)' and Dr. Lloyd Roberts, and unanimously adopted. It was also resolved—"That the President, Mr. Whitehead, and the Honorary Secretary be requested to prepare, and forward to Mrs. Bradley in the name of the Society, a letter expressing the profoundest sympathy of the Society with her in her sad bereavement, and its deep sense of the irreparable loss which it has itself sustained." And it was then decided at once to adjourn the meeting by the unanimous vote of those present.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

At the annual meeting of the College, held pursuant to the provisions of the Supplemental Charter, on Monday, June 7, the following officers were elected for the year 1880-81 :—*President*: Alfred H. M'Clintock. *Vice-President*: Samuel Chaplin. *Secretary*: William Colles. *Council*: John Kellock Barton, William Colles, Anthony H. Corley, John Denham, William A. Elliott, George H. Kidd, Edward Hamilton, Archibald H. Jacob, Robert M'Donnell, Rawdon Macnamara, Edward D. Mapother, F. Alcock Nixon, George H. Porter, Philip Crampton Smyly, W. Thornley Stoker, William Stokes, Henry R. Swanzy, T. Jolliffe Tufnell, and William I. Wheeler.

THE METROPOLITAN WATER-SUPPLY FOR APRIL LAST.

The report of the Examiners on the water supplied by the various metropolitan companies during the month of April last is again anything but satisfactory. Lieutenant-Colonel Bolton, in his remarks on the condition of the water previous to filtration, says the state of the water in the river Thames at Hampton, Molesey, and Sunbury, where the intakes of several of the companies are situate, was good from the 1st to the 15th of the month, when it became bad, and remained in that condition until the 22nd ; it then improved in quality and continued in a good state for the remainder of the month. The water in the river Lea was fairly good during the greater part of the month. The water at all the intakes was in a worse condition during the latter part of the month of April than in March, but the filtration of the water by the different companies was generally efficient. The results of the analysis of Dr. Frankland are, however, less satisfactory ; he reports that the Thames water supplied by the Chelsea, West Middlesex, and Grand Junction Companies was of fairly good quality; but that of the last-named company was turbid, and contained moving organisms. The Southwark and Lambeth Companies sent out water of very objectionable quality, containing a very large proportion of organic matter. The Lambeth Company's water was also inefficiently filtered. The Lea water delivered by the New River and East London Companies was inferior to the better samples of Thames water, but was efficiently filtered before delivery. The deep-well water of the Kent and Colne Valley Companies, and that supplied by the Tottenham Local Board of Health, was of its usual excellent quality for dietetic purposes.

HONORARY DEGREES, CAMBRIDGE.

It is stated that at a Congregation held on Thursday, at Cambridge, it was intended to propose to grant the honorary degree of Doctor of Laws to the following gentlemen on the occasion of the proposed meeting of the British Medical Association at Cambridge in August:—Dr. Paul Broca, Professor of Surgical Pathology in the Faculty of Medicine, Paris; Dr. C. E. Brown-Séquard, F.R.S., Professor at the Collége de France, Paris; Dr. Chauveau, of Lyons; Dr. F. C. Donders, Professor of Physiology at Utrecht; Dr. S. D. Gross, of Philadelphia; Sir William Jenner, K.C.B., M.D., F.R.S.; Sir William Gull, M.D., F.R.S.; Sir George Burrows, M.D., F.R.S.; Mr. William Bowman, F.R.S.; Rev. S. Haughton, M.D., F.R.S., Fellow of Trinity College, Dublin; Mr. Joseph Lister, F.R.S.; Dr. Denis C. O'Connor, President of the British Medical Association; Mr. John Simon, C.B., F.R.S.; Dr. Andrew Wood, M.D., F.R.S.E.

THE HEALTH OF IRELAND FOR THE FIRST QUARTER OF 1880.

The quarterly return of the Registrar-General for Ireland for the first three months of the present year shows that to March 31 last there were registered in the 801 registrars' districts in that country 35,208 births, a number equal to an annual birth-rate of 26·3 in every 1000 of the estimated population; and 30,654 deaths, representing an annual rate of 22·9 per 1000. In the same period 15,551 persons emigrated. A decrease of 10,997 would, therefore, appear to have taken place in the population, which, according to the last estimate, may be set down as 5,363,590. It is stated that there is no doubt that a considerable portion of the increase in the number of deaths recorded is owing to the more complete registration effected by means of the burial returns furnished under the Public Health (Ireland) Acts, 1878-79. The number of deaths returned as having resulted from the principal zymotic diseases is 2985, or 9·7 per cent. of the total deaths registered. This number is 178 over the deaths from the same causes in the corresponding quarter of 1879, and 297 over the average mortality for the first quarter of the three years 1877 to 1879. Of the 94 deaths from small-pox no less than 64 occurred in the county and city of Dublin. Measles caused 361 deaths, scarlet fever 610, diphtheria 76, and whooping-cough 554. Diarrhœa is credited with 497 deaths and cholera with 5, but all the latter were probably of a simple kind, and, if so, might fairly have been included under the former head. The reports of the various registrars are of a more favourable character than might have been anticipated considering the many privations which the

population have suffered from in the more remotc rural districts of Ircland during the past few months. Compared with the first quarter of 1878 it appears that the unusual severity of the winter of 1878-79 had a more injurious influence upon the public health, and added more to the mortality than the privations of the winter of 1879-80. The former cause was beyond the control of public measures or of charitable organisations, whereas the latter appears to have been efficiently met by these means. Deaths accelerated by destitution, at all times rare, are not more numerous than usual in the winter season, and a careful inspection of the tables and registrars' notes shows that up to the present there has been no appearancc of pestilential outbreaks, such as usually follow on distress which has been unsuccessfully met by means of relief.

THE DEATH OF MR. JOHN HARRISON, F.R.C.S. ENG.

We regret to record that Mr. John Harrison, of Chester, died at his residence in that city on the 3rd inst. Mr. Harrison was Consulting Surgeon to the Chester Infirmary, and Senior Surgeon to the Chester Lying-in Charity, and occupied a leading position there as a surgeon and as a citizen. We shall take an early opportunity of giving a short notice of his laborious and useful life.

THE GENERAL MEDICAL COUNCIL.

A summons has been issued to the members of the General Medical Council to meet at the office of the Council in Oxford-street, for a session to commence on Wednesday, July 7, at two o'clock p.m. As there is not this year any Medical Acts Amendment Bill to distract the attention of the Medical Council, it may be hoped that they will devote themselves to a real and careful consideration of the preliminary and the professional education of the medical student —subjects of primary and urgent importance, which they have hitherto constantly postponed, though they have as constantly been heaping up materials to aid them in coming to a decision, and have before them a quantity of returns of various kinds which they have ordered the Registrar to obtain for their information and guidance.

MEDICAL PARLIAMENTARY AFFAIRS.

Employers' Liabilities.—In the House of Commons, on Monday, June 7, Sir Charles Dilke, in reply to Captain Aylmer, said that the Consuls at Paris and Berlin had been instructed to forward abstracts of the laws now in force in those respective countries in reference to the liability of masters for injuries to their servants.

London Water-Supply.—Sir William Harcourt moved that the Select Committee on the water-supply of London do consist of seventeen members, and that the Corporation of London, the Board of Works, and the companies should be heard by counsel. The names were agreed to. On Tuesday, Sir William Harcourt proposed the addition of Mr. Hubbard's name, which was agreed to.

Cattle Plague in Cyprus.—Earl Granville, in reply to Lord Lilford, said that there had been an outbreak of cattle plague or rinderpest in the island, and precautionary measures were taken to prevent the spread of the infection. A recent report stated that there had been no extension of the disease. It was important to protect the draught cattle belonging to the Cypriotes from the ravages of a disease imported with cattle required for meat and for milk by the English.

The Care of the Insane.—On Tuesday, June 8, Mr. S. Leighton rose to call attention to the care of the insane. He said that there were 70,000 prisoners in England, 18,000 in Ireland, and 6000 in Scotland, and all were detained by the authority of the State for reasons of public safety, each suffering under a feeling of intense wrong, whether in reason or not. He contended that the remedy for this is that the care of the insane is a subject of Imperial obligation. Rich lunatics were sent to private licensed houses. The middle-class and poorer lunatics were handed over to the poor-law and the ratepayers, and were degraded into paupers. Many of them were clergymen, men of letters, artists, etc. There were 1000 Chancery patients, who were highly favoured. Every 333 Chancery patients had one visitor, but for every 10,000 ordinary patients there was only one inspector. There was a temptation to retain profitable patients longer in such places than was necessary. The Commissioners made the suggestion that no person either directly or indirectly concerned in supplying lunatic hospitals, and no medical officer thereof, should be a member of the governing body. Who could deny the justice and propriety of that remark? And yet every owner of a licensed house was the sole purveyor, medical officer, and governor of the establishment! How could there be a stronger condemnation of the system than was implied in that single fact? When an unfortunate person belonging to the middle class was afflicted with insanity his family had to consider whether they would send him to one of those expensive private houses or to the county asylum. Why should those people be forced by the action of the law to become pauperised? The cures in the pauper asylums are fewer than in private houses. The authorities who govern the inmates of these large pauper asylums are a congeries of conflicting authorities, which naturally often produced a deadlock. He suggested that the Government should take over at once all the pauper lunatic asylums of the country. It would then separate once and for ever pauperism from insanity, and insanity from pauperism. Most of the licensed houses would die a natural death. He summed up his argument in favour of this resolution on these four grounds—first of all, the duty of the State to undertake this work; secondly, the abuses of the existing system; thirdly, the hardship occasioned by associating insanity with pauperism; and, lastly, the outrageous grievance of the present system to the ratepayers. The hon. gentleman concluded by moving the following resolution:—"That the care of the insane is a subject of Imperial obligation; that the placing of insane persons, not of the class of paupers, in the category of paupers on account of their insanity is inexpedient; and that the cost of maintaining lunatic asylums is an unfair burden upon the ratepayers." Mr. Dodson replied that the cost of these institutions, when managed by the central authority and paid for out of the State funds, would be far larger than when they were under local management and supervision. He could not admit that insane persons were by reason of their insanity reduced to the condition of paupers. He did not think the transfer of the prisons to the State furnished a very encouraging precedent in this direction. Such transfer had greatly increased centralisation, had removed much of influence and authority from the local authorities, and was, moreover, in the position of an experiment which had not yet been fully tried. The natural tendency of transferring the management of local institutions to central bodies was to increase the expense by reason of the fact that officials of State had not the interest in economy possessed by local bodies. He could not assent to the motion. Mr. Sclater-Booth also objected to it. The motion was withdrawn.

County Asylums.—Mr. R. Paget rose to draw attention to the inconvenience of sending criminal lunatics to county asylums, and to the necessity for making separate accommodation for idiots and for chronic lunatics now in those asylums. Science had stepped in and told us that insanity was nothing more nor less than a disease. Our great lunatic asylums were no longer prisons or houses of detention for the safe-guarding of lunatics, but hospitals for the care and the cure of those who were afflicted with a particular disease. Persons in any way tainted with crime ought not to be sent to our county asylums; their example was bad, and their whole tone had a disturbing and deteriorating effect upon those with whom they were associated. There was every inducement for malingerers to sham insanity in order to receive better diet and more lenient treatment than they would in prison. His contention was that all who became insane during the period of their sentence, whether in a State prison or undergoing penal servitude in a convict prison, should be maintained in separate prison asylums. There was a radical precaution taken in the case of pauper lunatics which was neglected in the case of criminal lunatics. Whenever a pauper lunatic was sent to an asylum, the law required that the medical man who certified should specify the acts of insanity which he had himself observed. The criminal lunatics were sent by the warrant of the Secretary of

State, and the visitors had nothing to do but to accept his fiat. These lunatics ought clearly to be a charge on the State. With respect to adult idiots, they could, he thought, be better treated in an asylum by themselves. That remark applied still more strongly to the case of idiot children, who, if taken by the hand in their early days and carefully trained, might have their dim and latent intelligence so improved as to make them happier members of society and in a great degree self-sustaining. That was shown by the experience of the excellent institution at Earlswood. It was highly desirable that power should be given to counties to combine for the purpose of setting up special and separate asylums for idiots. Unions now possessed such a power, but counties did not. With regard to chronic lunatics, at present they were entering the asylums faster than they were going out; but that fact was greatly owing to the circumstance that the science and skill and care of the present day helped to prolong the lives of those poor creatures far more than was the case fifty years ago. In many instances now those patients had been in the asylums for twenty and even thirty years. There should be auxiliary asylums for the care of chronic patients. The motion he proposed was, "That a Select Committee be appointed to inquire into the laws relating to the custody and maintenance of criminal lunatics, of idiots, and of chronic lunatics." Mr. Peel remarked that in the earlier part of the evening they dealt with lunatics, but they were dealing now with a class which to lunacy superadded crime. The four classes of criminal lunatics were sent into different localities—to Broadmoor in certain cases, to the lunatic wards at Woking, to pauper asylums of the jurisdiction where the prison was situate, and to lunatic asylums where the crime was committed. He quite agreed with the hon. member that the mass of statutes connected with this subject required both consolidation and amendment. In March of last year the late Home Secretary appointed a committee, in the nature of a departmental committee. The subjects referred to that committee were whether it was desirable that criminal lunatics should be separated from pauper lunatics, what special provisions should be made for the care and custody of lunatics, and whether Broadmoor had answered its purpose, or whether it was necessary to alter its constitution. That committee had not been able to meet for practical business before the dissolution of Parliament, and he now proposed to re-appoint it, and to submit to it the same subjects of inquiry as before.

Munificence of Professor Rizzoli.—Prof. Rizzoli, so well known by his numerous contributions to surgical science, now a senator and in the seventieth year of his age, has just presented to the city of Bologna, where he resides, the magnificent sum of 1,250,000 fr. in order to found an orthopædic institution.—*Lyon Méd.*, May 23.

Disinfection of the Stools in Typhoid Fever by Charcoal.—M. Maurel, a naval surgeon, stated at the Therapeutical Society that the fœtid stools in typhoid fever are easily disinfected by administering one and a half or two grammes of Belloc's charcoal. The absorption of putrid matters is obviated, and the favourable issue of intestinal ulceration is assured. The charcoal may even destroy the infectious agent, and it suppresses the fœtid odour of the stools. Dr. Guéneau de Mussy observed that for the prevention of auto-infection Chomel was in the habit of giving chloride of lime in typhoid cases, and that he himself has for a long time past administered for the same object salicylic acid in rice-water, sometimes adding a little lemon-juice. M. Constantin Paul, in imitation of Polli, administers the hyposulphite of soda in enemata when the intestine is gravely affected, using them cold in typhoid fever, and tepid in dysentery. As to the action of charcoal, judging from the fact that when it gains admission to the lungs it sometimes causes chronic pneumonia, he fears that it might cause too much irritation of the Peyerian patches; it does not combat flatulence as an absorbent, but as a stimulant, restoring their vitality to the tissues and exciting them to fulfil their functions. M. Grellety observed that Dr. Bouchard gives a tablespoonful of charcoal every three hours. The fœtid odour disappears, and neither hæmorrhage nor other accident is produced. The statistical results of this treatment are very favourable.—*Lyon Méd.*, May 23.

ALFRED SWAINE TAYLOR, M.D., F.R.S.

In Alfred Swaine Taylor there passed away one of those men who are representative of an important branch of medical science. Medical jurisprudence or forensic medicine seems nowadays, however,—perhaps from the superior education given to the rising generation of medical practitioners,—to be the gift of all men. But there were giants once in this department, and among these Dr. Taylor must take his place, even alongside of Orfila or Casper. In Britain there are but four left who can be called medical jurists of the first class—these are Guy, Ogston, Maclagan, and the veteran Christison. Thus it will be seen that a single death may make a woeful breach in the ranks of a group all too slender, and entirely composed of men who must pass away ere long. Briefly elsewhere are given in our columns the chief features of Dr. Taylor's life, but such dry records never show a man in the full light, or even give the slightest hint as to his personality—what he was like, or how his character impressed itself on others. Even in such a sketch as this it would be impossible to shadow forth one who was amongst the brightest glories of the great school of medicine at Guy's, and the foremost representative of his department of medicine in this country. Personally, Taylor was of a tall and imposing figure, gracious to friends and bitter to foes, and, as the lawyers found, a superb witness, not to be shaken by any light wind of doctrine.

But the life and work of Dr. Taylor are so intimately connected with medico-legal cases, great and small, that they can only be estimated aright by a reference to a certain number of these. For many years Dr. Taylor was a kind of standing counsel to the Treasury, and all cases of difficulty were referred to him, if not for judgment, yet for advice. Thus, in course of time, his experience became enormous, unequalled in this country, except perhaps by that of Christison in Edinburgh. Then there was a thoroughness about Taylor's work which was always satisfactory, and to the outcome of many of his investigations the *Guy's Hospital Reports* bear ample testimony. To some of these we would gladly refer were the means of reference at hand, but there is one which strikes us especially now, as it did many years ago, as in its way perfect. Dr. Taylor was consulted in a case, the exact title of which escapes us, where it was necessary to determine the nature of certain stains supposed to be blood-spots. The result was a most remarkable paper—the best of the time—on the means of recognising blood-stains. So, too, in other cases to which we need not further refer.

One of the most remarkable cases Taylor was ever engaged in was what was, and still is, called the Waterloo-bridge Mystery, the beginning of those "mysteries" unfortunately now too prevalent. Early one morning some boatmen found, on a pier of Waterloo-bridge, a carpet bag, which, on being opened, was seen to contain a quantity of human remains. These consisted of twenty-three portions, which Dr. Taylor and Dr. Painter carefully put together, and found to correspond to the skeleton of a man, certain parts, especially the skull, hands, and feet, being wanting. The greater portion of the flesh had been removed from the bones, and what remained had the appearance of having been boiled. The bones were roughly sawn asunder close to the joints, showing that it had been the work of no skilled person, who would have used a knife instead. The conclusion come to was that the man had met his death by foul play, probably by a stab in the left side. Certain evidence led Dr. Taylor to the conclusion that the man was a foreigner, probably a Swedish sailor; but of the depositors of the bag, or of the murderers,

nothing has been heard to this day. The case bears a curious resemblance in some points to the discovery of the dead body the other day in a Harley-street cellar, save that in this last there was no mutilation.

Two cases occur to us now where Taylor showed that singular shrewdness so necessary in a medico-legal investigator. One of these was that of the murder of Jael Denny by Thomas Drory. Now, Drory was supposed to be a highly respectable man, and it was plain that Jael was no better than she should be. She was discovered dead with a rope *thrice* round her neck, and the end loose directed towards the left hand of the deceased. But the deceased was not left-handed, and, even if she had been, the end of rope was too short for her to reach and to inflict the injury that had been done, for the first and the second turns cut so deep as to flatten the trachea. Thus, supposing the first turn had done this, it was not likely that a second, having the same effect, would be required, or would be possible, supposing the case to be one of suicide, which was the defence set up. Still less would it have been possible to put the short end of the rope round a third time. Drory was convicted and confessed.

In another and somewhat similar case a girl was found apparently suspended, but partially reclining on her back on the floor, with her clothes neatly gathered under her and carefully smoothed down. There was a bruise on the girl's eye, and there was blood on the floor and on the short tape by which she appeared to be suspended. Yet there was no blood on the girl's hands. Moreover, the rings of the trachea were fractured in front, and there was a deep mark of the *double* tape greater than could have been produced by the weight of the girl, supposing she had been suspended by the tape. Again, the injuries of this severe character were in front, and she was found lying on her back, her head being suspended by a *single* tape to a hook only three feet above the head of the deceased. Here, too, there was a conviction and a confession.

But Taylor was not always right, as was eminently notable in a case which for many years cast a gloom over an excellent and most careful man's life. The case was one of disputed paternity. A child was born four months after its father's death, and the mother a year after married afresh the man who was supposed to be the real father of the child. But having been conceived at least in wedlock, it was necessary to produce proof that the woman's husband was not the real father. The proof offered was that two months before the supposed date of conception the husband was attacked with hemiplegia, but it was also proved that he subsequently recovered almost completely. The man had drunk hard, and ultimately died of ascites. Both Dr. Taylor and Dr. Carpenter gave evidence that it was impossible for the man to beget a child under such conditions. Dr. Guy and Dr. Semple said that it was quite possible; and in this we heartily coincide. Probability is one thing, and possibility is another. Have we not the verdict of an Irish jury as to the legitimacy of an infant supposed to be begotten in the most advanced stage of locomotor ataxy?

(*To be continued.*)

THE STATUE OF QUETELET.—A marble statue by the eminent sculptor M. Frackim, raised by subscription to the memory of Quetelet, the celebrated statician and Secretary of the Academy of Sciences, was inaugurated recently in the presence of a large number of scientific and distinguished persons. It is placed in the courtyard of the Palais des Académies. Quetelet is represented in a sitting posture, with his left hand resting on a terrestrial globe. His meditative countenance is a striking resemblance, and his posture entirely natural.—*Presse Méd. Belge*, May 30.

ENTERIC FEVER IN INDIA.

As our readers are aware, the very important subject of enteric fever in India has of late been attracting much attention generally, and has frequently been discussed in our own columns. In editorial comments upon the reports of Surgeon-General Gordon, in original communications from experienced Indian medical officers, and in the abstracts of the papers recently read before the Epidemiological Society, this journal has supplied its readers with very full information as to the state of opinion of those best qualified to form a judgment as to the prevalence and peculiarities of enteric fever in India. The whole subject of Indian continued fevers is confessedly one regarding which we have yet much to learn, and we observe it is to form a theme for a special discussion at the Epidemiological Society on the evening of Tuesday, the 15th inst. It may, therefore, be useful to advert to some of the more important conclusions arrived at by Surgeon-General Ker Innes, lately the Principal Medical Officer of the Bengal Presidency. In some of our editorial notices of the views of Surgeon-General Gordon, lately the Principal Medical Officer of the Madras Presidency, we have already had occasion to refer to the fact that Surgeon-General Innes had found ample proof in the Bengal Presidency of the prevalence of enteric fever among the European troops. In an appendix to the recently published "Army Medical Department Report," Surgeon-General Innes makes some remarks on this subject, based upon the statistical returns of the troops of the Bengal Presidency for 1877.

And, first, there is the fundamental question whether a fever exactly similar in respect of symptoms and signs during life, and of pathological appearances after death, to the enteric fever of Europe, does undoubtedly occur in India. To such a question, answered by some in the negative, Surgeon-General Innes would at once give an affirmative answer. That numerous instances of true enteric fever occur among the European troops in India, he most firmly believes, that opinion resting not merely upon the perusal of reports, but upon his own personal observation of the cases themselves, which presented characters exactly similar to those of enteric fever as he had seen it in Europe. It would even seem that the disease is much more prevalent and fatal among the European troops in the Bengal Command than at the Home stations, for, on the average of six years, enteric fever annually attacked only 0·99 per 1000 of the troops in the United Kingdom, but 3·75 per 1000 of the troops in Bengal. It is remarkable that the ratio both of the number of admissions and of deaths from enteric fever is, on the average, almost identical in Bengal and in Malta—a station presenting in almost all respects, except that of temperature, so great a contrast to the natural conditions and barrack arrangements in Bengal.

Further, Surgeon-General Innes's observations and returns enable him to confirm the conclusion already arrived at by Dr. Bryden, that, of the European troops in India, those who have recently arrived in that country are by far most obnoxious to enteric fever. The greatest number of cases are always found to occur among those who have been not more than two years in India. Now, this result might, in part, be accounted for by the well-known fact that, in temperate climates at all events, adolescent and youthful adults, about the age of twenty-one or twenty-two years, are most susceptible to typhoid fever. But this factor of age is apparently not the whole of the explanation of the greater prevalence of typhoid among the recent arrivals in India, for Surgeon-General Innes, like Dr. Bryden before him, has found that it makes but little difference whether a soldier be twenty or twenty-five years of age at the time he arrives in India, so far as his chances of contracting typhoid are concerned. The mere fact, therefore, of recent arrival in India seems to be, for all soldiers under twenty-nine years of age, a factor of equal importance and concomitant influence with the age in increasing the chance of an attack of this disease.

This consideration naturally leads us to another question which has not as yet received a satisfactory answer, viz., this:—Is there anything in the climatic or other conditions

of such a country as India which induces a fever identical in all respects with the enteric fever of temperate climates—a fever which many hold to be always produced by a specific poison? Without entering at present into a full discussion of all the wide-reaching bearings of this question, we may mention that Surgeon-General Innes is obliged to confess that in many local outbreaks of typhoid in the Bengal Presidency, where the causation of the disease was carefully investigated by medical officers quite familiar with all the common means of its propagation in Europe, the etiology was left unexplained. In most of the outbreaks in question, however, there would seem to have been some grounds for suspicion regarding the purity of the water used for drinking or cooking purposes. Even when the water used within the camps is of unimpeachable purity, the beverages sold in the regimental and suddar bazaars frequented by the soldiers are often prepared from unfiltered and filthy water from the bazaar wells. But, if these were the sources of the mischief, one would expect to find typhoid prevalent among the natives of India. Surgeon-General Innes, however, can only repeat the observation previously made by others, that this disease would seem to be exceptionally rare among the native population. But we are not sure that any very authoritative opinion can be expressed on this point, for this belief in the immunity of the natives from typhoid seems to be founded mainly on the statistics of the native gaol population, who are probably placed in conditions in which they would be less likely to contract typhoid than if they were free to follow out their own tastes and habits in regard to their dietetic and domestic arrangements. It would therefore seem that we have not yet a sufficiently accurate knowledge of the diseases and causes of death of the native population of India to assert that typhoid fever is as rare among the general population as it has been found to be among the gaol population.

At present, therefore, the question remains—What are the definite causes of these frequent local outbreaks of typhoid among European troops in India? The fact that the disease far most frequently attacks soldiers within a year or two after landing would seem to indicate that climatic conditions must play a very important part in its development over and above all other predisposing influences. It has, indeed, been suggested by some that typhoid fever may be a direct result of a modified malarial influence, but Surgeon-General Innes points out certain facts at variance with such a supposition. Thus, the month of "May, the (chief) enteric fever season, is the least malarious period of the year in India. The stations that furnish the largest admission-rates for malarious fevers do not contribute a proportionate amount of enteric fever; and lastly, cases of enteric fever are not benefited by quinine in the way that we should expect on the assumption of this malarious connexion." It would seem, however, to be established that the nearer the time of arrival is to the hot weather, the shorter is the interval that elapses before the first occurrence of typhoid among newly arrived troops. On the whole, therefore, Surgeon-General Innes evidently is inclined to believe that there may be something in the climate itself and the new conditions of life in which European soldiers are placed in India, capable of originating enteric fever, apart altogether from any specific cause or even any mere filth cause. He is forced to admit that the ordinary explanations of the development of typhoid as it is known in Europe fail to embrace all the facts observed in India. But Surgeon-General Innes also makes a remark which we have ourselves insisted upon as being true of our own British communities, viz., this: that the number of admissions for enteric fever is not by any means a reliable index of the actual number of cases of the disease. In India, as elsewhere, enteric fever varies in severity from the mildest to the severest forms. Many of the former would never come under the notice of medical men at all, and even when they do so would be classified under the headings of simple continued fever, diarrhœa, mild remittent fever, etc. This consideration, we confess, increases our own scepticism as to the truth of the alleged immunity of the natives of India.

It is evident, however, that we have yet very much to learn regarding the fevers of tropical climates, and that nothing but good can result from a full discussion of these topics by all who have any right to be heard. It is possible that such discussions may not only be of advantage in regard to tropical fevers, but may also, in respect of enteric fever in particular, assist in bringing us nearer to accurate and precise knowledge regarding the etiology of that disease as occurring in temperate climates—a point concerning which, after all that has been said and written on the subject, we are as yet by no means agreed.

FROM ABROAD.

Rectal Alimentation.

This subject, which seems to have excited much more attention in the United States than among ourselves, was recently treated of in an elaborate paper read by Dr. Potter at the Medical Society of the State of New York (*New York Med. Record*, April 10), entitled "Rectal Feeding in Disease." Of the *rationale* of the procedure he speaks as follows:—

"No doubt the failure of rectal ingestion to obtain the high therapeutical importance which, in the opinion of the writer, properly belongs to it, has been due, in a large measure, to the incredulity which exists in regard to the digestion, assimilation, and final absorption into the blood of aliments, when administered in this manner. It is well known that both rectum and colon are comparatively deficient in lacteal vessels. Moreover, if these organs were so endowed, they do not possess the necessary digestive fluids for the disintegration, solution, and chylification of the alimentary matter so requisite to prepare them for absorption into, and final admixture with, the blood. Hence some observers, notably Leube, deny the possibility of rectal nutrition unless the food has been first artificially digested. While it is highly probable that the rectum possesses the capacity, in a limited degree, to absorb medicines, water, and even aliments, in thin solutions, whence they are received into the portal circulation, and then distributed to the system after digestion by the liver, yet this avenue would seem entirely inadequate to furnish sufficient nourishment for the sustenance of life during any considerable period. In discussing this question, Dr. Campbell remarks, 'No physiologist of the present day, however fully impressed with the wonderful capabilities of venous and membranous absorption, can feel perfectly satisfied that these alone, and without the intervention of some other factor wanting in the rectum, can rationally and adequately account for the success and apparently perfect efficiency of rectal alimentation as reported in journals, and, here and there, in some works on practice.' The most reasonable explanation of the efficiency of rectal alimentation is, in the opinion of this writer, to be found in the recognition of the reversal of the normal peristaltic action of the intestinal tube, whereby the rectal pabulum is propelled upwards from the rectum to the small intestine, where it meets the requisite juices for assimilation, and where also abound lacteals for its absorption into the blood. This newly recognised function of the alimentary canal has been, by its discoverer, Dr. Campbell, very aptly termed 'intestinal inhaustion.'"

The following is an abridged summary of Dr. Potter's conclusions:—1. Rectal alimentation is a valuable, and sometimes an indispensable agent, when, from any cause, stomachal ingestion becomes hurtful or impossible. 2. There cannot be the slightest doubt in regard to the adequacy of nutritive injections to sustain life and maintain the nourishment of the body, wholly unassisted by the ordinary means of ingestion, for a considerable period (from three months to five years), as attested by well-authenticated cases on record. 3. That rectal nutrition requires rather an explanation of its *rationale* than a demonstration of its truth. 4. That in a more enlightened understanding of its value and certainty of action on the part of the profession, rectal alimentation and medication will obtain a wider range of therapeutical usefulness. Limited hitherto, speaking generally, to the severer forms of chronic diseases of the stomach and œsophagus, it will soon become of vast service in the management of acute disease, when, from any cause, the stomach becomes intractable and rebellious. 5. That the adequacy of rectal feeding can be fully accounted for in the recognition of the retrostaltic action of the intestinal tube, the "intestinal inhaustion" of Campbell. In this manner digestion is as certainly accomplished as though the food came by way of the mouth instead of the rectum. 6. That a timely and

systematic employment of rectal alimentation and stomachal rest, in cases where the stomach is so disabled as to render the ordinary means of ingestion harmful or impossible, is demanded alike by reasons scientific and humanitarian, and it cannot for a moment be called starvation. Rectal alimentation, stimulation, and medication can be carried up to the point of affording the greatest amount of nutrition and support, and that wholly unassisted by any other means of ingestion. 7. That in many forms of disease stomachal ingestion is positively harmful, even though all food may not be immediately rejected. Such as is retained oftentimes undergoes decomposition, producing thereby fermentation, irritation, and distress, rendering it unfit for the purposes of nutrition, and finally the stomach expels the offending contents undigested. In such cases digestion is so disturbed as to render stomachal alimentation positively harmful, or even impossible, and its entire prohibition becomes at once a therapeutical factor of the greatest import. 8. That food sent upwards through a healthy avenue, in good and sufficient quantities, will contribute with vastly greater certainty to the nutrition and support of the body than when it reaches the absorbents through a diseased and disordered digestive tract, with its juices chemically at fault, and all its functions rendered morbid by pre-existing reflex or organic maladies.

Treatment of Convulsions of Children.

In a paper read at the New York Academy of Medicine (*New York Med. Record*, May 8), Dr. A. A. Smith, after referring to the various causes of convulsions in children, went on to say, as regards their treatment, however they arise, whether due to organic disease or functional disturbance, the convulsive paroxysm should be arrested and another one prevented by the administration of anæsthetics —chloroform preferably. As soon as the cause is discovered, it must, when possible, be removed. When pain exists, independently of easily removable causes, opium is the most valuable remedy, and may be given to children when more than four months old. Convulsions dependent upon the pain of teething should be controlled by opium before lancing the gums, as lancing these first might cause another convulsion. So when the pain is dependent upon worms, opium should also be given before a cathartic. In some instances the opium and cathartic may be combined with advantage. When the irritation is in or near the rectum an opiate should be first given, and when this has controlled the convulsions an enema should be administered. Convulsions apparently due to malarial poison (of which Dr. Smith has seen several cases), although not preceded by pain, yield more promptly to opium than to any other agent. When the paroxysm has been subdued, the child should be put under quinine to prevent its recurrence. As to lancing the gums, he has a high opinion of its utility, and that even when the tooth did not manifest itself at the surface. To a child over four months old a mother may be entrusted to give paregoric (the dose being explicitly directed) every half-hour until assistance arrives. For infants under four months Dr. Smith prescribes a teaspoonful every hour of a mixture of bromide and chloral with carbonate of soda, of which each dose contains one grain of each remedy. It is conveniently given in warm, sweetened water. Double this quantity may be given every one or two hours to children from six weeks to four months old, according to the frequency and violence of the convulsions. He rejects the use of the *hot bath*, the child almost invariably having one or more convulsions while immersed in it. The very agitation incident to its administration adds to the excitement of an already disturbed nervous system. The object should be to subdue this excitement, and not only is the bath forbidden, but the child should not be restrained while in the convulsion, and placed on a bed that does not creak, the room being kept quiet, well ventilated, and partially darkened. Only one person should be allowed in the room at a time, and opening and shutting of doors must be avoided. Over-active treatment is uncalled for, if not positively dangerous. Dr. Smith also spoke of the sedative effect of the bromides and of the value of maintaining it in cases in which the prolonged use of opium was undesirable. He believed that the intense itching which especially followed scarlatina and measles might be a cause of convulsions in young children, and in those cases the bromides acted most favourably. In occasional cases they aggravated the symptoms, and then chloral might be used. In convulsions with high temperature he recommended veratrum viride, two drops being given every hour to a child from six to eighteen months old. If it produce vomiting no harm is done, for the pulse and temperature then usually fall, and the convulsions cease. If this fail to control the convulsions the cold bath is indicated. Coma is very frequent in this class of cases, and the child is then in imminent danger. The temperature must be reduced, and for this the cold bath is the most efficient means.

Dr. A. Smith's paper is to be published in full in the *American Journal of Obstetrics*. At the discussion which arose upon it, Dr. Lewis Smith remarked that he had carefully observed the cases brought to the Bellevue Hospital outdoor department during six years, and had been unable to convince himself that there was any connexion between the convulsions of young children and the epilepsy of later life. The age at which epilepsy was liable to develope was from five to seven years; but he regarded the two as independent conditions. With respect to treatment, Dr. L. Smith stated that he had not carried a gum-lancet for five or six years, preferring to rely upon the bromide of potassium in relieving the irritation caused by the teeth. This he gives in large and frequent doses—two to six grains for a child over two months and under one year of age, repeated every ten, fifteen, or twenty minutes, according to the severity of the case. In convulsions of children he gives chloral, and always by the rectum, and has been astonished at observing the rapidity with which the convulsions ceased. He now rarely found it necessary to remain with the patient more than half an hour, whereas formerly he found not infrequently that several hours had to be passed before the convulsions were controlled. He could not agree with Dr. A. Smith in condemning the use of the hot bath. He believed it to be a most beneficial agent, and certainly when a child was threatened with convulsions, had twitchings, etc., he would put it into a hot bath, having often seen exceedingly good results follow. Twenty-five years ago musk and asafœtida were used a good deal; but now that the bromides and chloral were so commonly employed, convulsions in infants and young children are regarded as much less formidable than in those days. He now never gave anæsthetics in these cases. Dr. Hubbard disagreed with the last speaker in regarding anæsthetics as dangerous, having frequently used chloroform, and he agreed with the author of the paper that they were beneficial in arresting convulsions. He should, however, be afraid of using opium as he recommended. He had used the bromides and chloral with good success; but he had discontinued the warm bath in the ordinary sense of the term. He employed hot water, however, in the following way: strip the child, and then wrap it in flannel that has been wrung out of hot water, and over that place a dry blanket. The idea was to increase the action of the skin without producing shock; and all the good effects of the hot water were obtained as well as they could be by means of a bath. Dr. Hubbard felt inclined to believe that, in perhaps nine out of ten cases, convulsions in young children are due to errors of diet.

The Bromide of Ethyl.

At the meeting of the Société de Chirurgie on May 19 (*Gaz. des Hop.*, May 22), M. Terrillon stated the results of his continuance of the trial of bromide of ethyl. Encouraged by the success of the American surgeons, Drs. Levin and Turnbull (*Medical Times and Gazette*, April 24, page 460), he had administered it in fourteen cases either in hospital or private practice, the duration of the anæsthesia varying from eight to sixty minutes—usually from twenty to twenty-five minutes. If a full dose is given at first there is little suffocation, scarcely any irritation, the anæsthesia being generally produced in about a minute. The period of excitement is less long and less considerable than with chloroform. The face is congested, the pupils are greatly dilated, and the pulse and respiration are slightly accelerated. The second period varies accordingly as to whether it is desired to produce simple anæsthesia or obtain resolution. This last appears more difficult to obtain than with chloroform. There are usually no consecutive accidents, and only seldom some vomiting. The arousing of the patient is generally very easy, and less painful than after chloroform. M. Berger stated

that as the result of his experiments upon animals, in conjunction with M. Charles Richet, he believes that the ethyl is very inferior to chloroform as an anæsthetic, and that its employment is attended with more danger, as, when it is pushed at all far for producing resolution, the animals easily die—the period which separates anæsthesia from death being exceedingly short. Prof. Verneuil observed that anæsthesia by ethyl has its advantages and its inconveniences. He has been much struck by its remarkable energy, for it suffices, in some cases, to pass the compress two or three times before the face of the patient to render him insensible. In a case in which he was about to remove an epithelioma from the cheek by means of the thermo-cautery, he made a few applications to the part with the bromide of ethyl by means of the douche in order to produce local anæsthesia. To his great astonishment the woman was rendered completely insensible. Whatever it may be in other respects, the ethyl in his hands has hitherto always produced excellent effects as a local anæsthetic. Mr. Trélat, speaking of the different modes of inducing anæsthesia, said that for the last two years he has always derived good results from giving chloral internally before administering chloroform. Before the operation he gives to children or enfeebled women two grammes, and to adults in health four grammes; and in cases in which it is impossible to employ chloroform inhalations, he gives six grammes of chloral internally, from which he obtains a sufficient amount of anæsthesia. M. Le Dentu observed that four years since Prof. Dolbeau strongly insisted upon the danger of the association of chloral and chloroform, now recommended by M. Trélat, the greatest difficulty being sometimes experienced in arousing, after employing chloroform, patients who had been taking chloral during some days previously. M. Nicaise stated that he had found the bromide a good local anæsthetic, and especially when the thermo-cautery had to be used. When the actual cautery or the thermo-cautery was not employed, he preferred ether as a local anæsthetic.

LECTURES AT THE COLLEGE OF SURGEONS.

Mr. B. T. Lowne will bring his course of lectures on the Development of Sensory Organs to a close this day (Friday); and on Monday next, at four o'clock, Professor Hutchinson will commence his course of six lectures, four of which will be on some of the Surgical Bearings of Gout and Rheumatism, and two lectures on the Etiology of True Leprosy. The following is a syllabus:—

Lecture I.: Introductory remarks and definitions of terms (arthritis, gout, rheumatism, rheumatic gout); importance of the subject in reference to surgical practice. Facts as to clinical history of arthritic maladies generally; non-suppurative, painful, paroxysmal, prone to disappear and to relapse, much influenced by weather and season. Facts as to pathological anatomy; the synovial membrane; vascular fringes; pedunculated bodies; the cartilage—ulceration, absorption, fibrous hypertrophy and ossification; lips; the bones—induration, eburnation, absorption; extensive softening of ligaments, etc.; dislocations; anchylosis; deposits of urate of soda in relation to other changes. Reasons for believing in the existence of an arthritic diathesis; its relationship to the various maladies included. Lecture II.: Arthritic diseases in the lower animals; influence of race and country; age (senility); sex and associated influences; dict (gout); climate; season, weather, and occupation; exposure to wet and cold; temperament; inherited diathesis; modification of diathesis in transmission; acquired diathesis; hybridity of diathesis acquired in transmission; influence of the genito-urinary system and of the abdominal organs (gonorrhœal rheumatism, etc.); defect of nerve tone; diseases of the nervous system, and partial anæsthesia; catarrhal influences. Lecture III.: Rheumatic fever—threatened, abortive, acute, subacute, protracted; neurotic and humoral theories of; a catarrhal neurosis; chronic rheumatism of many joints; crippling rheumatism (the Thomson type), an important subdivision of "rheumatic gout"; single-joint rheumatism—transitory, protracted, permanent; hydrops articuli; morbus arthriticus senilis; importance of local causes; its relations to other arthritic maladies; gout and gouty rheumatism; the paroxysmal form; the chronic form; gout without tophi; nodosities of the digits; nature of the association between "gout" and "rheumatism"; transmutation in transmission; gout with rheumatic antecedents, and rheumatism with those of gout; certain associated maladies occurring now with one, now with the other. Lecture IV.: Iritis, many varieties; ophthalmitis; retinitis hæmorrhagica; neuritis; sciatica; lumbago; muscular rheumatism; neuralgia; the relationship of gout and rheumatism respectively to these various maladies; diseases of the skin in possible association with arthritic causation. Summary; importance of the doctrine of the arthritic diathesis in respect to treatment and prevention. Conclusion. Lecture V.: General facts as to the nature of leprosy; its local prevalence; its disappearance from some countries and persistence in others; conditions favouring disappearance; extremely varied conditions of climate, etc., under which it persists; its sameness in all regions; its heredity and non-contagiousness; summary of argument in favour of its depending upon some article of ordinary food; the fish-hypothesis. Lecture VI.: The fish-hypothesis stated in detail and explained; facts in its support; the known variability of fish-food as to unwholesomeness; prevalence of leprosy in cold climates in ratio with the use of fish as food, and in hot ones with its unwholesomeness; disappearance of leprosy with advancing civilisation; no other hypothesis of cause tenable; sameness of the malady implies sameness of cause; objections to the fish-hypothesis answered. Summary and conclusion.

REVIEWS.

Healthy Life and Healthy Dwellings: a Guide to Personal and Domestic Hygiene. By Geo. Wilson, M.A., M.D., C.M. Edin. London: J. and A. Churchill. 1880. Pp. xxii.—296.

Dr. Wilson, the able Medical Officer of Health for the Mid-Warwickshire Sanitary District, is favourably known as the author of a handbook of hygiene which has already reached a fourth edition—sufficient evidence of its having met a public want,—but while it contains much that every medical man ought to know, and has doubtless afforded valuable help to the hundreds of parochial surgeons upon whom the sanitary care of small rural districts has been thrust, it has always seemed to us to fall very short of what is still wanted by medical officers of health.

Viewed in relation to the purposes for which each of the two works has been written, we consider the present to be far the more perfect of the two. In less than 300 pages it covers an extent of ground such as has never been attempted in a popular treatise, and so far from being superficial, it contains a surprising mass of facts and information. It is remarkably free from the faults of popular works in general: though eminently readable it avoids the sentimentalism and would-be-rhetorical efforts which disfigure so many of its class.

It is marked throughout by a sound scientific spirit, and an absence of all hasty generalisations, sweeping assertions, and abuse of statistics in support of the writer's own particular views. This tone of moderation without the least surrender of principle is conspicuous in the discussion of the use of alcohol and tobacco, and the fashions of female dress.

The first chapter introduces the reader to the teachings of Vital Statistics, with special reference to preventable disease and the awful waste of infant life. The author seems, however, to be unacquainted with the conclusions of Dr. Rumsey's Fallacies of Statistics, which tend to show that the Registrar-General's so called healthy and unhealthy districts are not always what these names imply, but often owe their apparent characters entirely to the relative preponderance of children or adults in the population. Chapter II. is a good summary of the Principles of Human Physiology, and Chapter III. treats of the Causes of Disease, which are divided into—(*a*) those due to *hereditary influence*; (*b*) *self-induced and social causes*, these comprising what have been called the "diseases of modern life"; and (*c*) *material, local, and communicable causes of disease*, as impure air, damp, impure water, unsound food, and infection. Chapter IV., which is mainly compiled from the works of Parkes, Letheby, and Edward Smith, is thoroughly sound and practical. It discusses (1) the *nutritive values of food*, (2) the *choice of food and drink*, (3) *preparation of food*, and (4) *hints on diet*. Few, if any, housekeepers or mothers

can fail to derive valuable instruction from this chapter. Men, too, whose meals as regards hours and quantity must be regulated by the inexorable demands of their particular employments, will find much useful advice. The omission of any allusion to hominy, the taste for which is rapidly spreading in this country, must be an accident, and we think that the so-called "corn flour" (or, as the Americans more correctly style it, "*corn starch*") would be better classed with arrowroot than with maize; the passing observation that the gluten has been washed out does not sufficiently indicate its true nature to the unscientific reader. Chapter V., on Cleanliness and Clothing, contains nothing calling for special notice; but Chapter VI., on Exercise, Recreation, and Training, deserves attentive study by all, especially by such as have the care of the young from infancy to manhood and womanhood. Those, too, who would aid in promoting the physical, and through it the moral, well-being of the masses, will find here many valuable suggestions on the recreations of the people.

In Chapter VII. the author discusses the Home and its Surroundings—matters of vital importance in these days of rapid growth of towns, and of "scamping" building. Everything to be found in Dr. Corfield's Cantor Lectures, and a great deal more, is explained clearly and fully in the short compass of fifty pages. The best patterns of traps, closets, stoves, ventilators, etc., are named, and attention is directed to several matters usually ignored in books of this class. We may mention, as instances, the shameful relegation of the servants' sleeping accommodation to ill-ventilated basements, or to dark low garrets, cold in winter, and oppressively hot in summer; the liability of leaden soil-pipes, so generally recommended for their imperviousness, to corrosion by sewer-gas; Pettenkofer's objection to painted and glazed walls on the same principles as to waterproofed garments; the absorption and subsequent evolution of foul gases by the water-seal in traps; the evils of "made ground"; and the ease with which gas-burners might be rendered most efficient ventilators, instead of being, as at present, powerful deteriorators of the air. The chapter concludes with a short summary of the means of redress afforded to the householder by the law in the event of the landlord refusing to accede to the reasonable requests of the tenant.

The last chapter gives a History of Epidemics, abridged apparently from Dr. Guy's lectures on Public Health, and a concise description of the several zymotic diseases or fevers properly so called, in which, as elsewhere, we remark that Dr. Wilson believes in the occasional *de novo* origin not only of diphtheria and enteric fever, but of scarlatina, and in the pathological identity of diphtheria and croup; on each of these points we are strongly inclined to agree with him, though we fail to see on what grounds, unless the increased vigilance of our port sanitary authorities, he hopes that we have seen the last of cholera in this country. The remainder of the chapter is occupied with the means by which infectious diseases are spread, among which he calls attention to the practice of tailors and dressmakers putting out their work, though he omits the scarcely less dangers of the private laundry and mangle; the measures to be taken in the event of such diseases breaking out in the family or school, and directions for the subsequent disinfection of rooms, bedding, and clothing. We notice with special approval his sensible remarks on the futility of exposing vessels of so-called disinfectants in the sick-room, with a view to checking the extension of disease; the folly of deliberately exposing children of tender age to the infection of measles as to something in itself inevitable or in the course of nature; and his recommendation that all cases of infectious diseases should, in the absence of legislative compulsion, be voluntarily reported to the sanitary authority.

On the whole, we cannot speak too highly of a work which we have read with entire satisfaction.

Aspiration of the Knee-Joint. By Henry O. Marcy, M.A., M.D. Cambridge, Mass. 1880.

This little *brochure* deals with the question of aspiration of the knee-joint in cases of acute and chronic synovitis. The author advocates aspiration in all cases, and supports his views by his own results and those of a number of American practitioners whose experience he has collected. The only point in the paper which appears to be new is the repeated aspirations which he practises in acute inflammatory affections with effusion of fluid.

PROVINCIAL CORRESPONDENCE.

IRELAND.

Dublin, June 8.

Annual Medical Meetings: Royal College of Surgeons—Irish Medical Association—Royal Medical Benevolent Fund Society of Ireland.

Yesterday being the first Monday in June, the annual general meeting of the Royal College of Surgeons for the election of officers for the ensuing year was held, pursuant to the provisions of the Supplemental Charter. Dr. Alfred H. McClintock was chosen to succeed Dr. Edward D. Mapother in the presidential chair, and Dr. Samuel Chaplin, a provincial Fellow of Kildare, was elected Vice-President without opposition. Only one change took place in the constitution of the Council, Mr. Frederick A. Nixon being elected a Councillor in place of Dr. Edward G. Brunker. Mr. Nixon represents the Ledwich School and Mercer's Hospital.

The proceedings in connexion with the annual meeting of the Irish Medical Association commenced, as usual, with a breakfast at the Shelbourne Hotel. The Association afterwards met at noon in the Council Chamber of the Royal College of Surgeons for the despatch of business. The attendance was not quite so large as in former years. The chair having been taken by Dr. George H. Kidd, President of the Association, the minutes of the last general meeting wer eread and signed. Dr. J. H. Chapman, Honorary Secretary, then read the annual report of the Council. During the past year the Council held five meetings, and the Committee of Council forty-two meetings. Since the last annual report was submitted the following measures have become law:—1. The Vaccination (Ireland) Amendment Act; 2, the Dispensaries' (Ireland) Act; 3, the Disqualification by Medical Relief Act; and 4, the Public Health (Ireland) Amendment Act. The Council took an active part concerning each of these enactments, to which special reference had already been made in the quarterly reports issued in the past year. In reference to the subject of medical legislation, the report stated as follows the reform to which the Association pledged itself at the last annual meeting, viz.:—1. A revision of the constitution of the General Medical Council—(*a*) By a more equitable distribution of seats amongst the licensing authorities; (*b*) by widening the constituencies which elect the representatives of several of those bodies; (*c*) by a more direct representation of the general body of the profession. 2. The grant to the Medical Council of complete control over the education and examination of candidates for admission to the profession. 3. The compulsory establishment of a single conjoint examination for each division of the United Kingdom, which examination should be essential for admission to the licence of degrees of any of the medical authorities. 4. The enforcement of absolute uniformity in standard of examination, extent of curriculum, and amount of fees payable, required by each and all of the conjoint examining bodies. The other topics considered in the report were—Bills drawn up by the Association to amend the "Registration of Births and Deaths Acts," and the "Medical Charities" Laws of Ireland; the grievances of the medical officers of health; the abolition, in some instances, of the office of consulting sanitary officer; the admission of pay patients to workhouse hospitals; the superannuation of medical officers; the abuse of dispensary medical relief; the reduction of the salaries of poor-law medical officers owing to the depressed financial condition of the country; the difficulties which surround the granting of leave of absence to poor-law medical officers; the refusal of their legal fees to prison surgeons for evidence at coroners' inquests; the proposed incorporation of the Association; and the grievances of medical officers of district lunatic asylums in Ireland.

At the conclusion of the report the Council warmly congratulated Dr. Grimshaw upon his recent appointment to the important office of Registrar-General for Ireland, a position which he was pre-eminently qualified to fill; in consequence of which, however, the Council regretted that they have been deprived of his able and zealous assistance as an active member of their body and of the Committee of Council.

During the past year sixty-two new names have been added to the list of members, and eight resignations have been received, chiefly in consequence of leaving Ireland. With deep-felt regret the Council reported the loss of fourteen members by death, amongst whom was Dr. Charles Benson, an earnest friend and zealous supporter of the Association, as member, councillor, and president.

The adoption of the report having been carried, a series of resolutions were put to the meeting and passed unanimously. Among these resolutions the following were the most important:—

"That, in the opinion of this Association, the poor-law medical officers of Ireland are justly entitled to receive, as a matter of right, a superannuation allowance, not less in amount than two-thirds of their entire official emoluments, when they shall be incapacitated from duty by sickness or old age, or have served twenty years; and the Association believes that it would be greatly to the public advantage that such facility for retirement should be afforded."

"That this Association approves of the propositions made by the Council for the amendment of the law with reference to the abuses of the medical relief system, and expresses its opinion that the indiscriminate issue of tickets involves a heavy and improper charge upon the rates, and is oppressive and unjust to medical officers."

"That, in the opinion of this Association, the imposition of a fixed limit to the salaries of medical officers of health is a gross injustice towards those officers; and—inasmuch as the Association is advised that the scale so created is altogether at variance with the law, and with the understanding arrived at with the representatives of the Government—the Association requests the Council to renew its protest against this injustice on every fitting occasion, and to take such steps as are necessary to obtain a reconsideration of the matter."

"That this Association regards the admission to gratuitous treatment in workhouse hospitals of persons who are able to pay for medical attendance as a great injustice to the medical officers, and that the Council are hereby requested to direct their attention to the subject, with a view to the redress of this grievance."

"That the Irish Medical Association maintains its approval of the principles enunciated by the Council in reference to the Medical Act (1858) Amendment Bills, now before Parliament; and declares its opinion that no alteration of the existing law can be satisfactory which does not provide, by conjoint examination or otherwise, for a sufficient degree of professional competency, guaranteed by a curriculum of study and examination, uniform throughout the kingdom; and the Association furthermore believes that no such reform could be effectively carried out unless the General Medical Council be reconstituted, and adequate provision be made for the representation of the profession at large in that body."

Some other formal resolutions were afterwards put to the meeting, including one in support of the proposed incorporation of the Association. Dr. Chapman, the newly elected President, then took the chair, and shortly afterwards the proceedings terminated. In the evening the Association dined in the Albert Hall of the Royal College of Surgeons.

At 4 p.m. the annual meeting of the subscribers and friends of the Royal Medical Benevolent Fund Society of Ireland was held in one of the halls of the King and Queen's College of Physicians. The chair was occupied by Dr. Head, the President of the College. There was a large and influential attendance. Dr. James Little, one of the Honorary Secretaries, read the report, from which the following brief extracts are culled:—"Our excellent Society is feeling the effects of that financial depression which has prevailed for the last twelve months and upwards. This has been evidenced in a twofold manner—first, by an increase in the number of applicants, and secondly, by a falling off in the income of the Society. This is just what might *à priori* have been expected; and, looking at the state of the country, the Society is rather to be congratulated on being as it is, and no worse. As the causes which have led to this state of things are only exceptional and temporary, we may confidently hope that, with the returning national prosperity, our Society will show a corresponding improvement under both of the above aspects. The income of the Society derived from subscriptions in the past twelve months is below the average; whilst the amount received in the shape of donations is also much less than it has been for several years—in fact, only £30." "The honorary secretaries of our Indian branches—viz., Dr. Joynt, Dr. Chesnaye, Dr. Deane, and Dr. King—continue to give gratifying evidence of zealous and successful exertions on behalf of the Society, in the face of many difficulties and discouragements. Dr. Joynt remits £40 16s. 6d. from Bombay, Dr. King £46 15s. 10d. from Madras, and Dr. Deane 358 rupees (over £30) from Bengal—Dr. Chesnaye, the honorary secretary for this Presidency, being at the front in Afghanistan. The total number of applications for relief this year is 115, and exceeds by ten that of any former year since the foundation of the Society. During the interval between last and present annual distributions, grants had to be made in thirteen instances (three being surgeons), in consequence of the pressing wants of the applicants. The aggregate amount thus bestowed was £280 7s. 6d., very nearly double the sum voted last year during the like interval. Of these anticipatory grants, one of £20 was made in favour of a widow, to enable her to emigrate to her daughter, who was married and settled in Colorado, U.S.A.; another of these grants, to the amount of £15, was to enable an orphan to emigrate to New Zealand. It will be satisfactory to know that in both these cases the money granted was applied to the special purpose for which the Committee intended it, and that both the parties have safely reached their destination."

The total awards for the year were these:—To medical men, £505 7s. 6d.; to widows, £840; to orphans, £100—making a total of £1445 7s. 6d.

At the conclusion of the reading of the report, Dr. Wm. Thomson submitted the statement of accounts, which, with the report, was received and adopted. The rest of the business was routine.

GENERAL CORRESPONDENCE.

THE CALCUTTA HOSPITALS.

LETTER FROM DR. J. EWART.

[To the Editor of the Medical Times and Gazette.]

SIR,—I have just seen your issues of the 22nd and 29th ult., the first, among other things, containing a reiteration of some of the facts (?) relating to my administration of the Calcutta General Hospital, by "A Member of the Committee," the second publishing a letter by Dr. James Irving, which throws daylight upon the new order of things for the feeding and treatment of the sick, thus, in great measure, corroborating the declaration of the *Lancet* of January 3 last, to the effect that "with the Government the 'economy' of the matter is a question of pounds, shillings, and pence; with the doctors the 'economy' is the best welfare of the patient." Dr. Irving, who was Surgeon-General for Bengal during 1878 and a portion of 1879, has confirmed with such emphasis my exposure of the defective quality of the staminal components of the new dietaries, that it would be supererogatory for me again to go into that part of the subject in any detail. It may, however, be stated that all expenditure incurred in my time was duly sanctioned and approved by Government, and that it is quite erroneous to say that the old system sanctioned "maximum charges without making any provision to secure economy." It is remarked, in the thirty-first paragraph of my letter of November 19 last, that, "notwithstanding a liberal and benevolent system of feeding and comforting the sick, the provisions to secure economy and a proper adjustment of supplies to requirements were always so successful as to demonstrate monthly a substantial saving within the limits of the maximum allowed." What is now wanted by the profession and the public is a comparative statement, showing the prices paid for all kinds of provisions, extras, and wines under the old system in 1875 and 1876, and those paid under the new in 1878 and 1879, as hinted in the eleventh paragraph of my letter, and not the irresponsible and anonymous asseverations of "A Member of the Committee." Why has this not been done? It can no longer be concealed that much saving is effected by the importation of diets from the homes of patients, by cheap and inferior food, extras, and stimulants, and by the undue disallowance of the two latter from the fear of exceeding the estimate. In the faec

of a good deal of the evidence published with the resolution of February 24, as has been shown by Dr. Irving, and as I have demonstrated in a rejoinder to the Bengal Government, the savings effected in 1878 do not by any means prove "the soundness of the views taken by the Committee," but that they are effected at the expense of the true comfort and well-being of the sick, that the system is not working "satisfactorily and smoothly," and that it is only maintained by a control so severe as to hamper and embarrass the reasonable freedom of action of the prescribing officers,—so inflexible and severe that Dr. Smith, the Principal of the Medical College, was afraid to work up even to the restricted scale adopted. The unfortunate sequel to his exposure of the wholesale outside feeding and request for an increased allowance at the rate of sevenpence-halfpenny and one-shilling-and-threepence a day for natives and Europeans respectively is a significant commentary on the assurance that the "new system has worked and is working extremely well." I allude to his resignation of his appointment, at great pecuniary sacrifice, rather than be a party any longer to the working of such a system! As regards the vaunted success of treatment under the new system, it would be interesting and instructive if the annual returns of sickness and mortality for 1875-76 and 1878-79 were published with a view to show the quantity of disease and the results of treatment.

I have now to point out that to the causes assigned by the Committee for the increased cost of drugs and instruments, viz., higher prices and a depreciated exchange, etc., must be added several important factors left out of the account, viz., prior defective equipment, great increment in the surgical and obstetric work, the introduction of Listerism (a most costly method of treating wounds), requisitions for new instruments and drugs, and the wide-spread and liberal distribution of costly medicines to ailing government servants and to those sick officers arriving at the Presidency entitled to free medical attendance and drugs. The fact that my last annual indent for drugs was signed on or about May 31, 1875, and that, so far as I can judge from the papers in my possession, down to that date no irregularity has been proved, has been carefully concealed from view during the progress of this controversy. Does this show "fairness or impartiality"? The excess drugs said to have been written off and found intact in store in October, 1877—nineteen months after my departure on furlough on April 1, 1876, and after two other annual indents must have been submitted, on May 31, 1876 and 1877, with which I could have had no concern,—may, as I suggested, have been condemned in good faith. It is true that these were seen by several members of the Committee, and reported to be good. But mere inspection is not sufficient. Many drugs seem good enough, which on trial prove quite inert; and this is really so with much of the blistering-plaster supplied in India. Moreover, the new treatment of rheumatism of the joints by blistering must have led to increased consumption; whilst the greater employment, as I am informed, of other counter-irritants might explain the smaller quantity expended elsewhere. With regard to the extract—"Had stocktaking been done systematically by the responsible officer," etc.—it will be apparent, from what has been already stated, that this had no application to my administration.

The intelligence that would endeavour to blame me (*a*) for using my discretion in utilising the few private rooms for the segregation or quarantine of bad surgical, obstetric, and other cases, with a view to prevent hospitalism; (*b*) for the reception of a pregnant woman, although the wife of a Government teacher, after she had travelled by railway upwards of 900 miles in order that she might be placed under my special care in the female ward, and for not adopting the alternative of casting her off helpless and forlorn in a city like Calcutta, on the ground that her retention was an abuse of charity; and (*c*) for what seems to have been delay in transmitting lists of seamen treated in the General Hospital to the Accountant-General of Bengal to enable that functionary to adjust the Hospital Port Dues Fund—raised by a tax on the shipping of Calcutta—by which delay not a silver sixpence of the £15,000 has been lost to Government, is unworthy of "A Member of the Committee." So with reference to the lost clothing, which occurred months after I had left Calcutta.—(Appendix B, page 21, to my letter of November 19.)

But in this matter the real question at issue now is—Are the new rates of *three annas and six pies*, or *fivepence farthing*, for natives, and *eight annas*, or *one shilling*, a day for Europeans, sufficient for the supply of first-class food, extras, and stimulants for the sick? That they appear to fail in this respect is manifest from the trouble which has been taken to prove that second-class and inferior and cheaper food, etc., is quite good enough for the inmates of Calcutta hospitals; from the almost complete denial of extras and stimulants in the Sealdah or Campbell Hospital, in which the average death-rate is about 250 in the 1000; from the wholesale importation of about 10,400 diets from the homes of patients into the College Hospital; from analogous reinforcements in the General Hospital; from the earnest appeal of the Principal of the College for an increased allowance of *five annas* (sevenpence-halfpenny) and *ten annas* (one shilling and threepence) a day for natives and Europeans; from the dissatisfaction with the present dietary openly and officially expressed by the Professors of Medicine, Materia Medica, and Midwifery (College Hospital), Dr. Cobb (General Hospital), Dr. Tameez Khan (Campbell Hospital), and the late Surgeon-General of Bengal.

Surely, therefore, the time is approaching—unless the Government by timely concession yield—for an inquiry into the working of the new dietary system by experienced medical officers not serving under the Government of Bengal.

I am, &c., Joseph Ewart, M.D.,
Late Superintendent, General Hospital, Calcutta.

Brighton, June 7.

NERVE-FORCE AND ELECTRICITY.

[To the Editor of the Medical Times and Gazette.]

Sir,—The interesting series of papers which you have just concluded, on "Some Analogies between the Nervous System and the Electric Telegraph," signed "W. F.," should not be allowed to pass unnoticed, both on account of the clear scientific reasoning of the main argument, as well as the failure to grasp what appears to me to be the right situation in the imaginary dialogue with which the able remarks of your correspondent conclude. With regard to the main arguments, I have long held that nerve-force is not only analogous to, but identical with, electricity (the word used in its widest signification),—that it is so similar as to indicate its presence by means of the same instrument, viz., the galvanometer. In the living organism we find a similarity of structure to that apparatus which man has evolved during years of patient toil to aid him in the production and convection of this subtle force. We find a main association of originating elements bound together by intercommunicating filaments, and connected with smaller batteries, as it were, as well as with distant points, by means of insulated cords, or, to take a wider analogy, the metropolitan centre connected with distant localities by direct lines, and district towns connected not only with the head centre, but also with each other, by cross-country lines of communication.

Now, nature turns out abundance of products from paucity of material; infinite variety is the result of the combinations of but few elements. So, too, physical laws are the same, whether exemplified in organic or inorganic matter. The laws of hydrostatics, hydrodynamics, of the diffusion of gases, of mechanics, as shown in the beautiful systems of levers, the exquisite perfection of the instrument of vision, subservient as it is to every rule of physical optics, show plainly that the Creator has not wasted His designs, but has wondrously worked out His whole creation on definite and unvarying truths. See, for instance, the infinite gradations of colour and shades of colour produced from a few basic tints; or the innumerable variety of sonorous phenomena resulting from mere vibrations; or again, the wonderful number of separate substances that differ from one another, perhaps only by the arrangement of an atom. Thus we are led to reason that in the force we least understand the probability is that it also has its counterpart in some phenomenon that is presented to us in the external world; nay more, that the subtle and rapidly acting force that works the message department of our bodies is neither more nor less than the same force that does the same thing outside the body, although man has been nearly 6000 years before he arrived at the knowledge of the fact; and then he stumbled upon it in the dark instead of

reasoning up to it inductively from the action of the wonderful apparatus within him.

Turning now to the dialogue between Religion and Science, it seems to be a weak fencing between two inexperienced wielders of the foils. In it Religion loses her temper, and tries to glorify herself, and Science is afraid of lunging out with sufficient energy lest she should overbalance herself; and so these two try and parry each other's blows without doing each other much damage. It seems to me that Religion and Science are not opposed to each other; they would walk hand in hand, but Man rushes in between them, terrifying Religion and "riling" Science, so that, turning their faces away, their paths diverge, and it is by divergence, and not by opposition, that they are separated. Let a man pursue science with a mind in unison with God's revelation, and he will soon find out that God has given us intellect and reason that we may be able to read His writing on creation, and by finding out His ways will come to a knowledge of Himself.

Small-minded persons make the Bible contradict Science by forgetting that it is not a scientific treatise, but written to be understood by ordinary men with common sense. The Astronomer-Royal speaks of "sunrise," and does not remark that "the portion of the globe on which he is standing arrived at that part of its path of rotation which permitted the rays from the central luminary of our system to reach him over the curve that extended eastward from him." There may be hidden depths in God's Book which would repay the search of the scientific man in the very fields of science. The doctrine of the circular theory of storms is written in the Book of Ecclesiastes, yet it is called a modern discovery.

Let us take heed, lest in following Science without Religion we may not be following a wrecker's light tied to the head of some not over-wise animal, and suddenly wake up to find ourselves engulphed in the ever-surging waters. The evolutionists, who are pursuing one of the great scientific questions of the day, trace back life till they come to a point where matter first becomes subject to motion, and there they are brought to a standstill; the link of their reasoning is broken, none dares to explain, and the chasm remaining unbridged, Religion cannot cross over, and the conclusion of Topsy remains the only explanation to satisfy the cravings of "science, falsely so-called."

At the end of the dialogue referred to, Science seems to come forward and to want to shake hands and make a sort of compromise; but let us rather try to bring these two together as real friends, and, by opening their eyes, show them how they will best help each other and us and keep to the straight path.

H. S.

Sebaceous Cysts in the Sole of the Foot.—Surgeon-Major Cameron observes that it is generally stated that sebaceous glands are absent from the palm of the hand and sole of the foot. In 1875 a police-constable in good health was sent into the hospital on account of an intractable ulcer at the side of the foot, measuring three-quarters of an inch in diameter. Its margins, composed of the tissues of the skin, were raw, red, smooth, and healthy-looking. Its base was covered with a brownish-coloured, inert-looking membrane, which, when unfolded by means of a probe, was found to be comparatively insensitive and to present a smooth, glistening, secreting surface on the side towards the exterior. It was removed by avulsion, and the ulcer, which had hitherto resisted treatment, healed quickly. The portion of the membrane removed had the characters of a cyst of a vein, and consisted only of a portion of the original cyst—the external portion having been lost by ulceration. It was dense and thick, and, having a free outlet, it contained no mass of fatty, pultaceous secretion, but felt and looked greasy. The history was of a small painless swelling on the sole, of its gradual enlargement, its becoming painful and bursting, and finally the formation of the ulcer. In 1877 a strong and healthy man came with a dense resisting cyst, the size of a marble, placed under the skin of the plantar surface of the fifth metatarsal bone, the skin over it being red, painful, and adherent. It was obvious that this was an earlier stage of the affection mentioned above, and this was proved by incision and avulsion of the cyst. It was an ordinary enlarged sebaceous cyst, containing atty, pultaceous matter.—*Indian Med. Gaz.*, May.

REPORTS OF SOCIETIES.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

Friday, May 21.

John Syer Bristowe, M.D., F.R.C.P., President, in the Chair

The minutes of the previous meeting having been read and confirmed, the report of the Council was presented on the advisability of the summaries of the next census being published at an earlier period than has been customary. The Council think it very desirable that the collection of the census reports should be accelerated, and they will report more in detail upon this subject at the commencement of next session.

Dr. Saunders, in commenting upon this decision, advised that the views of Mr. Chadwick should be adopted, viz., the decentralising system. New census districts should be mapped out, as he considered the parish boundaries inadequate for such purposes.

A letter was read from Dr. Billing, of Washington, requesting to be supplied with any sanitary reports that could be spared. It was resolved to comply with the request, and to suggest an exchange of sanitary literature for mutual benefit.

Mr. Lovett proposed that the July meeting be held in some suburban locality, arrangements being made for a dinner, to promote alike between the members of different sanitary districts, having very limited opportunities of consultation, the interchange of social and sanitary courtesies.

Dr. Tripe desired to say that he considered the time had arrived when the Local Government Board should have decided the *quæstio vexata*—"What is a pauper?" He would define it as "a person not able to provide medical relief in time of sickness, and one who cannot arrange for proper habitation under such circumstances." The exceptional and unfortunate circumstance of being laid aside on account of illness ought not to compel the sufferer to be branded with the stamp of "pauper" for a lifetime.

On some Public Health Points in the Management of a Small-pox Hospital.

Dr. Alexander Collie read this paper, a portion of which was published last week, and which is concluded in our present number.

In the debate following, Dr. Tripe complained that frequently at the Homerton Fever Hospital the ambulances are detained outside the gate, so that children and passers-by gather round to see the invalid. There should be no detention in the public streets. He had written repeatedly to the Asylums Board, making specific complaints, without being listened to. During the past six weeks he had received notice of seventy cases of small-pox, for the most part in the immediate vicinity of the Homerton Hospital. He had succeeded in tracing linen, etc., removed from this Hospital, to a rag shop.

Dr. Septimus Gibbon remarked that during the nine previous epidemics of small-pox in London there was an average of 2000 deaths in each, whereas in the last two the mortality averaged 7000. And, if correction be made for increase of population, it appeared that whilst the epidemic of 1866-67 caused 886 deaths in every million, or 1 death in every 1128 living persons, the epidemic of 1871-72 caused 2936 deaths in every million, or 1 in every 340 living; in other words, the latter epidemic was more than three times as fatal as the former. This increase he could attribute to no other cause than the existence of large hospitals at a distance often from the outbreaks of the disease, themselves a focus for the dissemination of the disease. He cordially approved of the suggestions in the paper as to the site and size of these hospitals, and would support Dr. Collie's proposal for a small hospital in every sanitary district.

Dr. McCombie, the Medical Superintendent of the Deptford Fever Hospital, said that he passes from the small-pox wing to the general wing without carrying the disease. There are ninety feet of space between the two blocks.

Dr. Dudfield alluded to the contest which had waged for some time between himself and Mr. Godrich respecting the

Fulham Hospital and the alleged possibility of aërial communication from the Hospital, the nearest house in the parish being a quarter of a mile distant. Any careless arrangements as to intercourse with the inmates is sure to favour the spread of the disease. Cases should be admitted without the formalities now required.

Dr. Bristowe had traced two or three epidemics of small-pox at Camberwell as due to the communication of the work-people at the Hospital with the neighbours. The nearer to the Hospital, the greater the number of infected houses. This is due to defective administration.

EPIDEMIOLOGICAL SOCIETY.

Wednesday, May 5.

Sir Joseph Fayrer, K.C.S.I., M.D., F.R.S., President, in the Chair.

On Removal in Cholera.

Surgeon-General Murray, M.D., read a paper on this subject. The author began by submitting to the Society some statistical tables showing the prevalence of cholera in India since the beginning of the present century. These tables showed that cholera scarcely appeared in the medical returns, from whence the tables were drawn, until 1817, when it broke out in Bengal and spread over India. Since then the disease has continued to appear at irregular intervals in all the provinces until 1862; but from that date there has been a marked diminution. The author's experience of the benefits of removal commenced while in charge of the central prison at Agra. In 1851 there was a severe outbreak of cholera among the native prisoners, beginning on July 25 and ending on August 29. On July 30 half the prisoners were removed into the ancient buildings at Secundra. From July 30 there were 54 attacks and 16 deaths; whilst among the 1500 which remained in the gaol there were 199 cases and 59 deaths. In 1856 there was another very severe outbreak in the same prison. The first case occurred among the prisoners on May 30, and the last on July 20. There were 50 cases and 21 deaths up to June 12; on June 13, 600 men were moved into old buildings in the vicinity, 500 into tents on June 28, and 700 more on July 3. Out of a strength of 3704, there were 349 cases in the gaol and 215 among those sent out. In 1860, a severe outbreak of cholera occurred at Agra, in which the European troops suffered much, and Dr. Murray moved them into tents and into the old buildings which had been occupied by the prisoners in 1851 and 1856. These buildings were not, therefore, available for the prisoners, who were attacked on August 8, and their removal into tents was delayed by rain until August 25. In these sixteen days there were 754 cases and 158 deaths. On August 26 there were 30 cases, but in the following seven days there were only 38, and only 3 more up to September 8, when the disease disappeared. Out of a strength of 2063, there were 807 admissions and 172 deaths. In 1861 another severe outbreak occurred in the same gaol on July 7, and lasted till August 10; 850 of the prisoners were moved into tents on July 10, after 50 cases had occurred and there had been 16 deaths. There were only 4 cases in the camp. Out of a strength of 2959 there were 173 cases and 65 deaths. The measures of removal which he had advised and thus carried out were guided by the principle that cholera is communicated from the sick to the healthy, either directly or indirectly, by vitiating the locality in which they reside, and the remedy consists in removing the healthy from that locality, and isolating the sick. This is effected in the most thorough manner by removal into tents, and afterwards by frequent changes of ground to short distances, until the disease entirely disappears. The epidemic of 1861 was very general in the N.W. Provinces and Punjaub, and the mortality amongst the European troops extremely high. A special commission was therefore appointed by Government to investigate and report on the subject, of which Mr. (now Sir John) Strachey was president. They made a minute and searching investigation. The result was that they approved the measures of removal that had been adopted at Agra, and recommended the issue of regulations enforcing the same instantly on the appearance of similar epidemics among the European troops in India. These regulations were much objected to by some parties in the year which followed, and in 1868 another commission was appointed at Simla to revise them, of which Dr. Murray was a member. The medical objections urged before the commission were that removal was needless, as the disease was not contagious, and that it was dangerous, as living in tents during the hot and rainy seasons was likely to induce other diseases, as sunstroke, fever, and dysentery, which are as fatal as cholera, and to which the men are less liable in barracks. In answer to these objections, it was stated that no increase of sickness had hitherto been induced by removal, properly conducted; that, on the contrary, there had in many cases been a decided improvement in the health of the men, and their health subsequently had been better than that of the men who had remained in cantonments. Objections were also urged against removal by the military authorities. They did not approve of the responsibility of taking this measure resting with the medical officer; but, as it is a medical question, it was thought that that department was best qualified to form an opinion of its necessity. Other objections to removal are of great practical importance. It gives great and serious trouble to the executive officers, who have to make the arrangements. The officers with the regiments suffer inconvenience and discomfort in moving from their houses into tents in the hot and rainy seasons. The liability to be recalled from temporary leave is also disagreeable. These are doubtless all real objections; but as the measure in question is for the benefit of the men they must be set aside. The expense of removal is certainly considerable, but that is more than compensated by the saving of life among the soldiers. A return of the instances of removal that had taken place the previous year (1867) showed that, out of 198, in 118 instances there had been no cases of cholera after removal, and in only fifty-nine instances had there been any cases after the fourth day. The deliberations of the Commission were followed by the Revised Regulations, published in G.O.G.G., No. 129, and will be found in the Sixth Annual Report of the Sanitary Commissioner with the Government in India. They differ in no essential point from those previously issued, but are more complete in details, which further experience had shown to be useful. These details comprehend restricted attention to all sanitary and hygienic rules, enforce the selection of high, well-drained ground for camp, to be if possible near trees, and if the troops could be taken across a river the advantage would be great.

The German Medical Commissioner's Report of the Plague during the Winter of 1878-79 in Russian Astrachan.

Mr. J. Lawrence Hamilton read a paper on this subject, which may thus be summarised. The official German medical report was mainly the work of the celebrated authority and expert, Dr. August Hirsch, of Berlin, whose general account especially of the etiology or causation of the plague in Russian Astrachan differs widely from the previously published remarks, views, and theories of the British Commissioners, Surgeon-Major Colvill and Dr. Frank Payne. 1. Between the commencement of October, 1878, and the close of January, 1879, a malignant contagious disease prevailed in Russian Astrachan, visiting six districts, in one of which only an epidemic spreading occurred. In all, some 450 to 500 deaths took place. 2. This highly contagious malady presented the distinctive characters of Oriental plague, sometimes attended with buboes, sometimes without. 3. The origin of this attack of the plague is uncertain. Plague is neither indigenous to nor a native of Astrachan, where, until 1878, the plague had not appeared since 1808. Nor can it be proved that the plague in Astrachan was imported from Resht in Persia, which town had suffered from epidemic plague in the winter of 1876 and 1877. Dr. Hirsch and his German colleagues attribute the outbreak in Astrachan to importation of infected effects from the Asiatic seat of the war recently fought out by Turkey and Russia. The plague in Astrachan is a further illustration of the difficulty, even after elaborate investigation, of tracing out and discovering the origin of the plague. 4. Owing to the imperfect and faulty reports of the nature of the disease in Wetljanka (a town on the river Volga, in Astrachan), the Russian Government could not avail itself of preventive or precautionary measures till the plague had attained its maximum intensity, and was already approaching towards its natural termination. Even then the Russian executive was not prevailed upon to take up the matter till *after* foreign nations and neighbouring powers had stopped the traffic from Astrachan, and foreign scientific medical experts had been sent out by foreign powers to examine into and to investigate the plague in Astrachan.

CLINICAL SOCIETY OF LONDON.

FRIDAY, MAY 28.

E. HEADLAM GREENHOW, M.D., F.R.S., President, in the Chair.

REPORT ON A CASE OF CONGENITAL DISEASE OF THE SCALP.

A REPORT was read on Dr. Radcliffe Crocker's case of congenital disease of the scalp, which was shown early in the session. Having seen the case, and having, owing to the child's subsequent death, had the opportunity of examining some of the affected skin, the Committee had arrived at the following conclusions:—That the disease had not materially altered in size or development since birth. That though the family history afforded no corroboration, there was some evidence in the child of eongenital syphilis; no connexion between the lesion and syphilis was, however, demonstrable. That the microscope showed diminution in the size of the papillæ, absence of hair-bulbs and sweat-structures, and increase of the fibrous tissue of the corium, bands of which passed between the lobes of the sebaceous glands, and sometimes completely separated them from the rest of the gland, while in other cases the lobes were still connected together, but fibrous septa passed up between them and produced a distinct racemose appearance. The glands, as a whole, were abnormally large. The Committee thought that this might perhaps be due to an intra-uterine inflammation of the corium, which led to a proliferation of the fibrous tissue, the atrophy of the hair-bulbs and sweat-structures, and the development of the fibrous septa between the lobes of the sebaceous glands. Whether this inflammation was specific or not there was not sufficient evidence to show. The report was signed by Jonathan Hutchinson, Dyce Duckworth, Robert Liveing, and H. Radcliffe Crocker.

REPORT ON A CASE OF KELOID.

Dr. GOODHART presented the report of the Committee appointed to consider a case of keloid. The following is a brief abstract of the report:—The Committee conceived the case exhibited at the Society one correctly designated keloid, the tumours presenting all the characters of the disease. The patient had been twice examined by all the members of the Committee at an interval of five months, and frequently in addition by Dr. Goodhart. As the result of the varied observations the Committee conclude that the keloid growths are all slowly changing and disappearing. The Committee drew up a series of questions to guide in gleaning information as to the nature, duration, etc., of keloid, and the results are detailed at considerable length. The conclusions arrived at are to the effect that the great majority of cases of keloid met with clinically originate in scars. The cases recorded as spontaneous cannot be disproved, but it is possible that some of them, like other recorded cases, may have originated in minute scars, and the Committee purpose therefore to regard it as a disease of scar tissue, and to discard altogether such terms as true and false keloid. They are, however, of opinion that it is possible that there are conditions which may morphologically be allied to keloid, and which are more deeply placed. It does not appear that any marked differences can be maintained between keloid proper and syphilitic keloid. When present in syphilitic scars it is only less well pronounced than when occurring in simple scars. Other observations follow upon the duration of keloid, and some interesting cases not hither recorded are presented in the report. They conclude by referring to the pain of keloid, the manner of its appearance, and the time of life at which it most often appears.

A CASE OF ACUTE HYSTERICAL VOMITING OF TEN MONTHS' DURATION CAUSED BY DISPLACEMENT OF THE UTERUS.

Dr. GRAILY HEWITT read a paper on this case, which was related as a typical and extreme instance of an affection not uncommon in gynæcological practice. The patient was a young lady, aged twenty, under the author's care at the All Saints' Institution for Ladies suffering from Illness, 127, Gower-street. She had always been very active, but not accustomed to take food in fair quantity—much the reverse. Menstruation before the onset of illness was irregular. Present illness dated from February, 1879, ten months prior to admission. Since that date there has been a gradually increasing severe and constant sickness. Patient has now for some time been unable to retain food in the stomach. Takes only a small quantity of koumiss. Menstruation has entirely ceased for the ten months. There is very extensive emaciation. She believes she has lost four stones in weight during the past year. Sleep—none; all attempts to walk produce exaggeration of symptoms; weakness very great. Previous medical attendant had, it is stated, surmised existence of uterine displacement. On admission in December, 1879, the patient was constantly sick; pulse very feeble; commencing bed-sore over sacrum; uterus low down in pelvis, much swollen, and in a condition of acute anteversion, with considerable flexion; uterus wide from side to side. The sickness was considered due to this displacement. Later on it was elicited that just before sickness began patient had jumped from a height of six feet, and felt sick after it. Probably the uterus was displaced by this leap. A friend of the patient's took the same leap, and was also made sick, but laid up for it and recovered, whereas this patient did not. The treatment consisted of nutrient enemata thrice daily; patient to be placed in knee-and-elbow position every hour for two or three minutes. At end of week, improvement; sound now used and uterus elevated; slight temporary increase of sickness, then much improvement. Cradle pessary at end of fortnight introduced, and since retained undisturbed. After this time food began to be tolerated by stomach; sickness entirely gone at end of third week. Afterwards improvement rapid; appetite, sleep, and general condition all good. Pulse changed from 50 to 80. After fourth week patient literally ravenous. Seven weeks after admission, discharged. Weight increased two stones during stay in institution. Menstruation has since returned. General health and strength and activity quite restored. The uterus was weak at the time of the leap. It became severely displaced. The displacement set up in a reflex way sickness. Reposition of the uterus at once relieved the sickness.

CASE OF ACQUIRED HYPERTROPHY OF ONE LIMB.

Mr. CLUTTON read a paper on a case of acquired hypertrophy of one limb. A boy, aged eleven, came to the outpatient room of St. Thomas's Hospital in October last, complaining that the whole of the right leg was swollen. The swelling had been noticed for two months, and was unaccompanied by any pain, but he found that he was rather lame. His mother was quite sure that previously there was no difference between the two limbs, and that he was never lame before. He had had no illness except scarlet fever at six years of age. This was not followed by any weakness of limb or lameness. On stripping the patient's trunk, so that he stands quite naked before you, it at once appears that the left lower extremity is, in proportion to the rest of the body, the normal limb, while the right seems too large. This is especially apparent on comparing the two sides of the body; the left arm and leg seem in natural proportions to one another, while the right leg seems too large for the corresponding arm; the two arms are evidently the same size. You will notice as he stands that there is slight lordosis and tilting of the pelvis. The measurements taken by Mr. Acland show that the right limb is longer than the left by one inch, of which the thigh and leg take about equal shares. The circumferences of the two limbs show a corresponding disproportion, the right being from one to three inches larger than the left. There is no difference in the measurements of the two upper extremities. The temperature taken frequently with the surface thermometer shows that the right limb is always from one to three degrees higher than the left. Dr. Kilner examined the patient, and found that to the interrupted current the limbs react equally and normally; but the right always offers less resistance than the left to the continued current. Mr. Clutton remarked that if this were a congenital case it would not be so remarkable as he believed it to be, for he considered the deformity to be an acquired one. To be congenital, one must disbelieve both the mother and the boy, or believe them to have been themselves deceived. They could have no object in deception, and the latter one can hardly conceive possible on looking at the two limbs; and the fact that he has only lately become lame corroborates their statements. The muscles alone are not enlarged as in pseudo-hypertrophic paralysis, but every structure entering into the formation of the limb seems to have gone a stage further in its development than the rest of the body. The limb itself seems to possess its normal relative proportions when viewed alone, but considered with reference to the rest of the body it certainly appears abnormally large. It will be of great interest to note whether this increased rapidity of growth on the part of one limb over the

rest continues as the boy developes. He is still only eleven years of age. Should any change occur Mr. Clutton hoped to be able to bring him again before the Clinical Society.

Mr. Bryant asked if the temperature of the lower limbs had been compared with that of the rest of the body. He thought the case was one of lessened temperature in the smaller limb.

The President nominated Messrs. Bryant, Clutton, Marsh, and Morris as a committee to examine and report upon the case.

Mr. Hutchinson considered the arguments adduced by Mr. Clutton in opposition to the congenital origin of the deformity were not conclusive. The child might have had at birth an inappreciable difference in the size of the limb, or the arteries supplying it of different size. A small amount of articular disease would produce an increase of temperature of the joint and its surroundings.

Dr. Bristowe was of Mr. Hutchinson's opinion. When he had seen the case some months since the leg was natural in all points excepting its size.

Dr. Glover thought the committee should also investigate the question of the general inferiority in size of the right limb compared with that of the left, as recognised by American surgeons. His views respecting the points of Mr. Clutton's case agreed with those of the two previous speakers.

Mr. Clutton had not taken the temperature of other parts of the body, and had thought it enough to examine the muscular action of the left limb for the sake of comparison. Possibly the case was one of congenital origin, but it was not so regarded by the patient's mother; who, however, could not well know the size of the nutrient arteries.

(*To be continued.*)

OBITUARY.

ALFRED SWAINE TAYLOR, M.D., F.R.C.P., F.R.S.

We regret to have to record that Dr. Alfred Swaine Taylor, so well and widely known as *par excellence* the English Toxicologist, died at his residence in St. James's-terrace, Regent's-park, on May 27, in the seventy-fourth year of his age. Dr. Taylor was born at Northfleet, Kent, in December, 1806, and, after receiving his general education at a private school, entered as a pupil at the then United Schools of Guy's and St. Thomas's, under Sir Astley Cooper and Mr. Joseph Henry Green, in October, 1823. After the schools separated he continued his medical studies at Guy's till 1828; and then studied in the principal medical schools of France, Germany, and Italy. In 1828 he had taken the licence of the Society of Apothecaries, and in 1830 he became a member of the Royal College of Surgeons of England. In 1848 he passed the membership of the Royal College of Physicians, London, and was elected a Fellow of the College in 1853, after having received the honorary degree of M.D. from the University of St. Andrews. In 1845 he was chosen a Fellow of the Royal Society. In 1832 he was elected joint Professor of Chemistry at Guy's Hospital Medical School, and occupied the chair without an associate from 1851 to 1870, when he resigned it. He also received from the Treasurer and Governors of Guy's Hospital the first appointment to the chair of Medical Jurisprudence in their School, and held it till a few years ago, when he ceased to have any connexion with the Hospital. Dr. Taylor published a work on Chemistry in conjunction with Mr. Brand, of the Apothecaries' Hall, and his manuals on Medical Jurisprudence and on Poisons are well known to members of the legal profession, as well as to all English medical men. For many years he was the highest authority on medical jurisprudence in England, and was frequently consulted by the Government with reference to cases of suspected murder by poison, and other cases which presented points of medical interest and importance.

It is stated that the Great Eastern Railway Company received many orders for the first consignment of sea-water from Lowestoft to London. A number of cans, perfectly tight, well corked, and fitted with a handle to admit of their being easily carried upstairs, were sent out for delivery by the Company's carmen.

MEDICAL NEWS.

Royal College of Surgeons of England.—The following members of the College, having undergone the necessary examinations for the Fellowship at the half-yearly meeting terminating on the 29th ult., were reported to have acquitted themselves to the satisfaction of the Court of Examiners, and, at a meeting of the Council on the 10th inst., were admitted Fellows of the College, viz.:—

Battle, William H., Lincoln, diploma of membership dated July 31, 1877.
Boon, Alfred Pearl, St. Kitts, West Indies, November 15, 1871.
Giles, George M. J., North-terrace, N.W., November 15, 1876.
Hayward, Thomas E., Tewkesbury, January 24, 1877.
Howlett, Edmund H., Upper Norwood, January 24, 1877.
Margerison, Richard, Cromwell-road, S.W., July 30, 1878.
Paddle, James J., Albert-street, N.W., April 20, 1880.
Pickering, Charles F., Bristol, May 18, 1876.
Saunders, Arthur R., Kingston, Jamaica, July 27, 1871.
Takaki, Kanehiro, Tokio, Japan, April 16, 1878.
Webb, J. R. Wynn, Shrewsbury, July 27, 1876.

All the candidates either possessed medical degrees or had been examined in medicine at the College. Eight candidates having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their professional studies for twelve months. It may be observed that Mr. Takaki is the first Japanese gentleman who has passed the final examination for the Fellowship.

Apothecaries' Hall, London.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, June 3:—

Benthall, Alfred Elliott, Sherborne, Dorset.
Hall, Thomas Lambert, Ashford, near Ludlow.
Hurtley, William Maw, Caledonian-road, Leeds.
Parke, Charles James, Hougham, Grantham.
Rogers, James Macdonald, 56, Berners-street, W.C.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to all new Appointments that take place.

Rensford, Chas. W., M.R.C.S.—House-Surgeon and Secretary to the Royal Isle of Wight Infirmary, Ryde, *vice* Bonner H. Mumby, M.B., resigned.

BIRTHS.

Alderson.—On June 1, at Southerton House, Hammersmith, the wife of Frederick H. Alderson, M.D., of a son.

Aveling.—On June 3, at 14, Portland-place, Lower Clapton, the wife of Charles T. Aveling, M.D., of a daughter.

Bridgwater.—On May 27, at Harrow-on-the-Hill, the wife of T. Bridgwater, M.B., M.R.C.S., of a daughter.

Brock.—On June 2, at 129, Clapham-road, the wife of John Brock, M.R.C.S., L.R.C.P., of a son.

Child.—On June 2, at New Malden, Surrey, the wife of Edwin Child, M.R.C.S., of a son.

Curgenven.—On June 5, at 41, Friar-gate, Derby, the wife of William Grafton Curgenven, M.D., of a daughter.

Edgelow.—On June 1, at Torquay, the wife of W. F. Edgelow, M.D., of a son.

Gowers.—On June 2, at 60, Queen Anne-street, Cavendish-square, the wife of W. R. Gowers, M.D., F.R.C.P., of a son.

Hutchings.—On June 3, at Southborough, Tunbridge Wells, the wife of Edward J. Hutchings, M.R.C.S., of a son.

Lawrie.—On May 9, at Simla, the wife of Edward Lawrie, M.B., M.R.C.S., Bengal Army, Professor of Surgery, Lahore Medical School, of a daughter.

Lewis.—On May 24, at Loughton, Essex, the wife of W. T. Lewis, M.R.C.S., of a daughter.

Newth.—On June 7, at Ardlin, Hayward's-heath, the wife of A. H. Newth, M.D., of a son, stillborn.

Purvis.—On June 8, at Royal Hill, Greenwich, the wife of John Prior Purvis, M.R.C.S., of a daughter.

Smith.—On May 31, the wife of Barton Smith, M.D., of 29, Charles-street, Berkeley-square, W., of a son.

MARRIAGES.

Frith—Owen.—On June 3, at Gordon-square, Charles Frith, M.R.C.S., of 65, St. Giles-street, Norwich, to Cathleen Mary, second daughter of David Henry Owen, Esq.

Hart—Locke.—On June 5, at Brighton, Robert W. Hart, Esq., late of Sandall, Wakefield, to Ellen, daughter of W. Locke, M.D., late of Clapham-common.

Holmstead—Davies.—On June 3, at Abchurch, Ernest Augustus Holmstead, Esq., of the Falkland Islands, to Edith Templer, eldest daughter of Herbert Davies, M.D., F.R.C.P., of Finsbury-square.

Manbey—Thomas.—On June 1, at Reading, the Rev. George Henley Manbey, M.A., Curate of All Saints, South Acton, youngest son of George Manbey, M.R.C.S., to Mary Jane, youngest daughter of the late William Thomas, Esq., of H.M.'s War Office.

MANNING—DIPNALL.—On June 3, Frederick Manning, M.R.C.S., of East Bergholt, Suffolk, to Helen Fanny, daughter of the late Sidney Smith Dipnall, Esq., of 206, Lewisham High-road, formerly one of the Comptrollers of H.M.'s Customs.

PINHEY—PALMER.—On June 8, at Great Yarmouth, R. Eardley Pinhey, Esq., of Oxton, Cheshire, to Emily Gertrude, eldest daughter of Frederick Palmer, F.R.C.S., of Great Yarmouth.

REED—TRACEY.—On June 3, at Notting-hill, William Henry Reed, Esq., of Lansdowne House, Acol-road, West Hampstead, to Henrietta Elizabeth, youngest daughter of Samuel John Tracey, L.R.C.P., M.R.C.S.

SARELL—VARSAMI.—On May 24, at Constantinople, Richard Sarell, M.D., M.R.C.P., to Thalia, daughter of Constantine Varsami, Esq., formerly of Glasgow.

SHAW—BOTTRELL.—On June 3, at Hereford, George Shaw, M.R.C.S., of St. James's Lodge, Enfield Highway, to Louise, second daughter of the late William Bottrell, Esq., of The Friars, Hereford.

SMITH—BECK.—On June 8, at Chislehurst, Horace Marshall Smith, Esq., son of T. Heckshall Smith, F.R.C.S., of Rowlands, St. Mary Cray, to Mary Agnes, eldest daughter of Morris Beck, Esq., of Chislehurst, Kent.

SMITH—HALL.—On June 2, at Bilston, Samuel John Smith, M.D., of Bilston, to Lucy Ashley, only daughter of John William Hall, solicitor, of Bilston, Staffordshire.

STREATFEILD—ADAM.—On June 8, at Boston, the Rev. Henry Bertram Streatfeild, M.A., of Exeter College, Oxford, vicar of Holy Trinity, Skirbeck, Boston, to Agnes Blount, eldest daughter of A. Mercer Adam, M.D., and J.P. for county of Lincoln.

DEATHS.

BRADLEY, SAMUEL MESSENGER, F.R.C.S., Surgeon to the Manchester Royal Infirmary, at Ramsgate, on May 27.

DAVIES-COLLEY, MARY SCHOFIELD, daughter of Thomas Davies-Colley, M.D., at Newton, near Chester, on June 2.

GARDNER, ISABEL FREDERICA, wife of Harry Gardner, M.D., M.R.C.S., at Westbourne-terrace Villa, Westbourne-square, on June 8, aged 53.

HARRISON, JOHN, J.P., F.R.C.S., at 18, Nicholas-street, Chester, on June 3, aged 71.

HAWKINS, ELLIE, wife of Howard Hawkins, M.R.C.S., on her homeward voyage from Australia, on May 4, aged 27.

HENRIQUES, AMOS, M.R.C.S., at 67, Upper Berkeley-street, on June 5, in his 69th year.

SAWYER, HARRIET, the wife of R. H. Sawyer, M.R.C.S., at Cann, Shaftesbury, on June 1, aged 33.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BIRMINGHAM GENERAL DISPENSARY (ASTON BRANCH).—Resident Surgeon. Candidates must be registered and possess a medical and surgical qualification. Applications, accompanied by certificates of registration and original testimonials, to be sent to Alexander Forrest, Esq., Secretary, on or before June 21.

BIRMINGHAM GENERAL DISPENSARY, UNION-STREET.—Resident Surgeon. Candidates must be registered and possess a medical and surgical qualification. Applications, accompanied by certificates of registration and original testimonials, to be sent to Alexander Forrest, Secretary, on or before June 21.

EAST RIDING LUNATIC ASYLUM.—Assistant Medical Officer. Candidates must be under thirty years of age and unmarried. Applications, with testimonials, to be sent to Edmund B. Whitcombe, Esq., Medical Superintendent, not later than June 18.

GATESHEAD DISPENSARY.—Assistant-Surgeon. Applications, with testimonials, to be sent to Mr. Joseph Jordan, Hon. Secretary, Dispensary, West-street, Gateshead, on or before June 15.

MANCHESTER ROYAL INFIRMARY, DISPENSARY, AND LUNATIC HOSPITAL.—Honorary Assistant-Surgeon. (*For particulars see Advertisement.*)

SHEFFIELD PUBLIC HOSPITAL AND DISPENSARY.—Junior Assistant House-Surgeon. Applications, with testimonials, to be sent to the Honorary Secretary of the Medical Staff, 221, Glossop-road, Sheffield, on or before June 15.

SMALL-POX AND VACCINATION HOSPITAL, HIGHGATE-HILL, UPPER HOLLOWAY.—Resident Surgeon. Candidates must be members of the Royal College of Surgeons of England, and Licentiates of the London Society of Apothecaries, and unmarried. Board and residence provided by the Hospital. (*For further particulars see Advertisement.*)

WESTMINSTER GENERAL DISPENSARY, GERRARD-STREET, SOHO.—Physician. Candidates must be Doctors or Bachelors of Medicine and registered practitioners. Diplomas or testimonials to be sent to John Potter, Esq., Secretary, on or before June 21.

WHITEHAVEN AND WEST CUMBERLAND INFIRMARY AND FEVER HOSPITAL.—House-Surgeon. Applications, with testimonials (prepaid), to be sent to Mr. James Knight, Secretary, before June 25.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Dunmow Union.—Mr. G. S. Watson has resigned the Thaxted District: area 13,376; population 4034; salary £99 18s. 8d. per annum.

APPOINTMENTS.

Hastings Union.—Walter Grant James, L.R.C.P. and L.R.C.S. Edin., to the Third District.

Huddersfield Union.—David Wilson, M.B. and C.M. Glasg., to the Workhouse.

Kettering Union.—Harold Adcock, M.R.C.S. Eng., to the Corby District.

Lichfield Union.—David Edgar Flinn, M.K.& Q.C.P. Ire., L.R.C.S. Ire., and L.M., to the Ogley Hay District.

Sunderland Union.—John Rankine, L.R.C.S. and L.R.C.P. Edin., to the Bishopwearmouth East District.

CAMBRIDGE.—The Public Orator, in presenting Mr. Charles Creighton, M.D., Demonstrator of Anatomy in the University, for the degree of M.A. *honoris causâ*, described him as supplying an admirable illustration of the complimentary reference to the characteristics of the Scotch race, which had recently been made by the Professor of Anatomy in the Rede Lecture of the previous week. He further alluded to Dr. Creighton's education at the Universities of Aberdeen and Berlin, and his pathological investigations on the subject of cancer, undertaken in 1872 to 1876, for the then existing Medical Department of the Privy Council. He also referred to his appointment as Demonstrator of Anatomy four years ago, as happily encouraging the combination of teaching with the continuance of original research, remarking that the former was not infrequently apt to become one of the most dreary and irksome of tasks, if severed from the element of living interest and awakening stimulus supplied by the former.

IRISH MEDICAL ASSOCIATION.—At the annual general meeting, held on Monday, June 7, the following members were elected to the undermentioned offices, for the year ending May 31, 1881:—*President:* Dr. John H. Chapman, Dublin. *Vice-Presidents:* Leinster—Dr. Chaplin, Kildare; Ulster—Dr. Bagot, Enniskillen; Munster—Dr. Molony, Tulla; Connaught—Dr. Coates, Portumna. *Council:* Drs. Berry, Mallow; R. Browne, Rathmines; Samuel Browne, Belfast; H. G. Croly, Dublin; Darby, Bray; Drapes, Enniscorthy; G. F. Duffey, Dublin; R. Gray, Armagh; J. R. Harvey, Dublin; Hayes, Naas; A. H. Jacob, Dublin; David Jacob, Maryborough; J. Bellew Kelly, Drogheda; Kidd, Dublin; Kinkead, Galway; James Martin, Portlaw; R. McDonnell, Dublin; F. V. McDowell, Baltinglass; G. Morrogh, Dublin; Nolan, Gort; Edward Peele, Dublin; Perceval, Stradbally; Pollock, Blackrock: George H. Porter, Dublin; T. Purcell, Dublin; J. Ridley, Tullamore; Sharkey, Ballinasloe; H. J. Smith, Donaghmore; Speedy, Dublin; Tagert, Monkstown; W. Thomson, Dublin; Whistler, Bray. *Auditors:* Dr. Mayne, Ballybrack; Dr. Boyce, Stillorgan.

ST. JOHN AMBULANCE ASSOCIATION.—The annual conference of lecturers and examiners of this Association took place on Wednesday, June 2, at St. John's-gate, Clerkenwell. Dr. Sieveking, Physician to St. Mary's Hospital, presided, and the following medical gentlemen were present, representing the metropolis and provinces, viz.:—Messrs., W. Pye, H. W. Page, D. Colquhoun, Amphlett, H. Whitehead, J. H. Casson, E. Cowen, Steel, H. P. Potter, R. D. Fox Cockcroft, W. E. Buck, A. Young, W. C. Lowe, S. Benton, B. Rix, L. A. Weatherly, E. Cosgrave, M.D., E. Mackey, and Surgeon-Major Baker, with Major F. Duncan, R.A., and Mr. J. Furley. The chairman described the movement as one of the most useful and philanthropic works in which the medical profession could engage. As they were exempt from many inconvenient calls on their time, to which others have to submit, he thought it right that they should devote what time they could to the advancement of the community and to such instruction as was within their sphere. Several gentlemen referred to the remarkable success of the movement, chiefly in consequence of the labours of Major Duncan on its behalf. A sub-committee, consisting of Mr. Casson, Mr. Young, and three other gentlemen, to be appointed by the Ambulance Medical Committees of Westminster, St. Mary's, and Charing-cross Hospitals, was appointed to revise the late Surgeon-Major Shepherd's handbook, of which more than 15,000 copies have already been sold by the Association. Other matters of detail were disposed of.

RUPTURE OF HYDATID CYSTS OF THE LIVER.—In a paper read at the Académie de Médecine (*Gaz. Heb.*, May 28), Dr. Féréol observed that this occurrence is by no means so necessarily fatal as it was not long since supposed to be. The present state of our knowledge seems to justify the following conclusions:—1. Preliminary suppuration gives rise, in the case of rupture, to a rapidly fatal peritonitis, except, perhaps, when the peritoneum has become partitioned by adhesions which limit the inflammation. 2. The penetration of a limpid and fresh liquid into the peritoneum, which in some cases seems inoffensive, in others has been followed by rapidly fatal accidents, without our being able to state with precision the reasons of these differences. 3. The presence of living hydatids in the peritoneum is less dangerous than that of dead hydatids; in the former a

spontaneous cure is possible. 4. In cases in which the accidents that follow the rupture are not severe, or become moderated, and yet ascites is produced, we should interfere when this ascites has not a tendency to become absorbed. Simple puncture may suffice to produce a cure, but when this fails we should as soon as possible evacuate the foreign bodies contained in the peritoneum. This may be done by washing out the peritoneum twice a day by means of a large trocar and canula with a wide lateral opening and Fauchet's syphon-tube. Dr. Féréol believes that the same practice may be adopted in some cases of limited peritonitis.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Mr. Greenwood's paper shall appear in due course, but it is impossible that it can have precedence over others already long in hand. His correction shall be attended to.

Dr. Alex. Marsden, Senior Surgeon to the Cancer Hospital.—Chian Turpentine.—Our Hospital Reporter having been refused any information upon the subject of Chian turpentine when he called at the Cancer Hospital, it would be most becoming if Dr. Marsden has anything to say on the subject that he should communicate with that gentleman through us.

Archæologist.—There is a portrait of William Butts in the celebrated picture by Holbein in Barber-Surgeons' Hall. The original cartoon by the same artist can be seen on the staircase of the College of Surgeons. Butts was knighted by Henry VIII. He took his Doctor's degree at Cambridge, and in 1519 petitioned to be incorporated *ad eundem* at Oxford.

Dr. Campbell.—We believe a son of Dr. Valentine Mott is now in this country. It was the late Sir P. Crampton who said—"To Dr. Mott, of New York, is due the merit of having been the first to suggest and the first to effect the ligature of the common iliac artery."

A Fellow.—Not having signed the by-laws you cannot be allowed to vote at the annual election; but there is nothing to prevent your taking part at the Fellows' festival the same evening, when Sir James Paget, Bart., will occupy the chair.

A Novel Defence.—A chemist's assistant at Paris has been charged before the Correctional Chamber with causing the death of a man by misreading a prescription. The doctor, whose writing is very clear, ordered eight drops of laudanum, which the assistant carelessly read as eight grammes, or about a quarter of an ounce. The overdose killed the patient, and the Court sentenced the prisoner to three months' imprisonment. The advocate for the defence urged, as an extenuating circumstance, that if the mistake had cost the deceased his life, it had at least provided him with a painless death.

B. A. M.—1. No. 2. Berkeley says, Siris, section 68, "Nothing is more difficult and disagreeable than to argue men out of their prejudices. I shall not, therefore, enter into controversies on this subject, but, if men dispute and object, shall leave the decision to time and trial."

A Preference.—At Menai Bridge, the inhabitants, in public meeting, resolved to apply to the Local Government Board to place the district under the control of a Board of Health, in preference to its continuance under the Bangor Rural Sanitary Authority. The Marquis of Anglesey, it was stated, had promised an excellent watershed at a nominal rent, and thus a want from which the district had long suffered would be supplied.

A Highly Favoured Institution.—The almost unexampled public benevolence bestowed on the Hospital for Consumption at Brompton appears to be continued with undiminished munificence—a fact noticeable at the time from the officially announced decreasing incomes from voluntary contributions to other kindred institutions. The annual report, presented to the Court of Governors held last week, shows that the financial progress of the charity in the past year afforded cause for much thankfulness, the increase in the annual subscriptions being especially satisfactory. The increase in the amount of legacies was exceptional, as it included the balance of Miss Read's bequest. The year's income from all sources was £43,578 9s. 4d., and the expenditure, including more than £16,000 on account of new building, was £33,040 19s. 2d. The works of the new building were rapidly advancing towards completion. The new building will provide 137 additional beds for in-patients, whose admission will entail an increase in the expenditure of £10,000 a year.

A Temperance School-Book.—At Bristol, at a meeting of the School Board last week, a resolution was rescinded by which the Board had recently adopted Dr. B. W. Richardson's Temperance Lesson-Book for use in the schools. Dr. Caldicott, the Vice-Chairman, contended that, so far from being a pro-temperance book, it was an anti-temperance work, the whole instruction being to substitute total abstinence for temperance.

A Fellow, Manchester.—The largest number of candidates who offered themselves for seats in the Council of the College of Surgeons was, we believe, in 1878, when for the three vacant chairs there were ten candidates—one more than on the present occasion. On that occasion 307 Fellows voted.

Lex.—The late Dr. A. S. Taylor obtained the Swiney Prize, which consists of a silver goblet of the value of one hundred guineas, and a like amount in coin.

A New Health-Resort.—Bexhill-on-Sea, the newly projected town on the south coast, is about to be laid out as a seaside bathing-place. It is on the west side of St. Leonards, with Pevensey Bay and a stretch of channel and coast scenery in front.

Thrift and Temperance.—A new coffee-tavern, combined with flats for the working-classes, has been opened in Lever-street, St. Luke's, under the title of the "Rainbow Coffee-Tavern." It is the enterprise of a few ladies and gentlemen desirous of promoting habits of thrift and temperance amongst the working-classes of this densely populated district. The premises (built by the Committee) are constructed with a view to meet the social and sanitary requirements of the tenants.

Census Items.—According to the last census (1878) of New Zealand, the population numbered 414,412, an increase of 38·36 per cent. in four years, and compared with 16·82 per cent. in the previous three years. The Maori population was 43,595, and was steadily decreasing in presence of the increasing numbers of the European races. The noticeable feature of the return is the want of proper balance between the sexes. There is room for a large emigration of our female population. Exclusive of the Chinese, who are nearly all men, and number about 4000, there are in New Zealand 226,574 men and boys to 183,405 women and girls—an excess of one sex over the other of 43,169, or something like two in every ten.——The Danish census, taken February 1 last, shows that the population of the kingdom, the Faroe Islands included, was 1,980,675. The increase in the last ten years has been about 200,000.——The last census of the members of the Society of Friends in the different counties or districts of Great Britain showed the number to be 14,700. London and Middlesex had assigned to it no less than 2065, or nearly a seventh part of the whole number of British Friends. From the statistics it appears that the members of the Society have left the rural districts and centred in and around the large towns.

The London Anti-Vivisection Society.—At a meeting of this Society, held at South Kensington last week, the chairman stated, in the course of his address, "that the modified system of permitting the practice within certain limits and under certain conditions had failed—the limits had been exceeded, and the conditions had never been observed." He added "that a strong movement was on foot in Germany, Italy, France, Belgium, and in the United States to get the practice abolished. Resolutions were passed to the effect that vivisection was useless, cruel, and that the practice was "liable to great abuse"; that it ought to be totally prohibited; and the meeting pledged itself to support the Victoria-street Society in the endeavour to obtain an Act of Parliament to that effect."

Obstreperous Students.—The result of the insubordination of the students at the Medical College of Montpellier is a complete cessation of work. Neither the school authorities nor the young men will yield, and the establishment is declared closed until further orders. The riot arose out of an attempt to appoint an official unpopular with the students. A force of gendarmerie is at Montpellier to maintain order.

Diogenes.—It was Lord Macaulay who, in reference to the remark of Mr. Southey, to which you call notice, observed—"The advice and medicine which the poorest labourer can now obtain, in disease or after an accident, is far superior to what Henry VIII. could have commanded. Scarcely any part of the country is out of the reach of practitioners who are probably not so far inferior to Sir Henry Halford as they are superior to Dr. Butts. That there has been a great improvement in this respect, Mr. Southey allows; indeed, he could not well have denied it. 'But,' says he, 'the evils for which these sciences are the palliative have increased since the time of the Druids, in a proportion that heavily overweights the benefit of improved therapeutics.' We know nothing either of the diseases or the remedies of the Druids; but we are quite sure that the improvement of medicine has far more than kept pace with the increase of disease during the last three centuries. This is proved by the best possible evidence. The term of human life is decidedly longer in England than in any former age respecting which we possess any information on which we can rely. No test of the physical well-being of society can be named so decisive as that which is furnished by bills of mortality."

A Grumbler, Kilburn.—Parliament has empowered the London water companies to charge their rates on the "full annual value" of the property which is rated. Under the Assessment Act of 1869 that value is periodically ascertained, upon which the water companies act.

The Rate of Mortality, Poland.—From some statistics given in a Russian paper, it is seen that Poland is in many ways still progressing in advance of Russia, notwithstanding her repressive rule. *Inter alia*, the following fact is worthy of notice: in Poland the rate of mortality is 27 per 1000, while in Russia it is 33.

COMMUNICATIONS have been received from—
Dr. E. Waters, Chester; Surgeon Longstaff, Wandsworth; Mr. F. Greenwood, London; Mr. Reginald Harrison, Liverpool; The Registrar of Apothecaries' Hall, London; The Kepler Malt Extract Company, London; Dr. Christopher Elliott, Bristol: The Public Orator, Cambridge; The Editor of "The Ironmonger"; The Sanitary Commissioner, Punjab; The Registrar-General, Ireland; Mr. R. W. Parker, London; The Secretary of the Royal Medical and Chirurgical Society; Mr. John Chatto, London; Dr. J. E Glascott, Manchester; Mr. Alexander Marsden, London; Mr. Alexander R. Brown, Glasgow; The Honorary Secretaries of the Epidemiological Society of London; Mr. R. Price Williams, London; The Secretary of the Society of Arts; The Registrar-General of Edinburgh; The Secretary of the St. John Ambulance Association; Mr. T. M. Stone, London; Dr. J. W. Moore, Dublin; The Secretary of the Royal Polytechnic Institution, London; Dr. W. Watson Cheyne, London; Dr. C. Meymott Tidy, London; Dr. James Robinson, Dunscar; The Secretary of the Royal Institution of Great Britain; Dr. J. Ewart, Brighton; Dr. Willoughby, London.

BOOKS, ETC., RECEIVED—
Report of the Medical Officers of Health on the Borough of Newcastle-upon-Tyne for the year 1879—Report of the Medical Officer of Health of the Borough of Nottingham upon the Epidemic of Measles and the Prevalence of Scarlet Fever, 1879-80—Fifteenth Annual Report of the Borough Lunatic Asylum, Newcastle-upon-Tyne—Thames Conservancy Report on Main Drainage Outfalls, by Sir J. W. Bazalgette, C.B.—On Preservation of Health in India, by Sir Joseph Fayrer, K.C.S.I., LL.D., M.D., F.R.S.—Enteric Fever in India, by Deputy Surgeon-General Joseph Ewart, M.D.—A Treatise on Comparative Embryology, by Francis M. Balfour, M.A., F.R.S.; Associated Homes, by Edward Vansittart Neale—Report of the Metropolitan Fever and Small-pox Hospitals at Homerton for 1879.

PERIODICALS AND NEWSPAPERS RECEIVED—
Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Centralblatt für die Medicinischen Wissenschaften—Nature—Revue Médicale—Occasional Notes—Gazette Hebdomadaire—Louisville Medical News—El Siglo Médico—Guy's Hospital Gazette—British Mail—Sanitary Journal, Toronto—Practitioner—Students' Journal and Hospital Gazette—Analyst—Centralblatt für Gynäkologie—Philadelphia Medical Times—Dublin Journal of Mental Science—Therapeutic Gazette—Medical News and Abstract, Washington—Boston Medical and Surgical Journal—National Board of Health Bulletin, Washington—Chester Courant, June 9.

APPOINTMENTS FOR THE WEEK.

June 12. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

14. Monday.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Royal College of Surgeons of England, 4 p.m. Prof. Jonathan Hutchinson, F.R.C.S., "On some of the Surgical Bearings of Gout and Rheumatism."

15. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Statistical Society, 7¾ p.m. Mr. R. Price Williams, "On the Increase of Population in England and Wales."

Epidemiological Society (University College), 8 p.m. The papers "On Continued Fever in India" read during the present session will be discussed. (The papers were read by Deputy Surgeon-General Ewart, M.D., Surgeon-General Gordon, M.D., Surgeon-Major Don, M.D.)

16. Wednesday.

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Lister), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.; National Orthopædic, Great Portland-street, 10 a.m.

Royal College of Surgeons of England, 4 p.m. Prof. Jonathan Hutchinson, F.R.C.S., "On some of the Surgical Bearings of Gout and Rheumatism."

Guild of St. Luke (59, Mortimer-street, Cavendish-square), 7½ p.m. Rev. George Greenwood, M.A., "On the Threefold Nature of Man."

17. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

18. Friday.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Gny's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

Royal College of Surgeons of England, 4 p.m. Prof. Jonathan Hutchinson, F.R.C.S., "On some of the Surgical Bearings of Gout and Rheumatism."

VITAL STATISTICS OF LONDON.

Week ending Saturday, June 5, 1880.

BIRTHS.

Births of Boys, 1270; Girls, 1219; Total, 2489.
Corrected average in the 10 years 1870-79, 2413·8.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	685	621	1306
Average of the ten years 1870-79, corrected to increased population	746·1	683·5	1429·6
Deaths of people aged 80 and upwards ...	...	...	48

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa
West	561359	2	10	4	1	8	1	1	...	3
North ...	751729	3	3	15	2	16	...	1	2	5
Central ...	334369	...	...	4	...	3	...	...	...	2
East	639111	1	9	11	1	14	...	4	...	6
South	967692	2	10	26	3	19	2	5	...	4
Total	3254260	8	32	60	7	60	3	11	2	20

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·880 in.
Mean temperature	51·7°
Highest point of thermometer	69·4°
Lowest point of thermometer	37·5°
Mean dew-point temperature	45·6°
General direction of wind	Variable.
Whole amount of rain in the week	0·55 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, June 5, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1880.*	Persons to an Acre. (1880.)	Births Registered during the week ending June 5.	Deaths Registered during the week ending June 5.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values	Rain Fall. In Inches.	Centimetres.
London	3664149	48·6	2489	1306	69·4	37·5	51·7	10·95	0·55	1·40
Brighton	107321	45·6	70	30	66·7	38·0	51·3	10·73	0·27	0·69
Portsmouth ...	134224	29·9	83	35	...	...	...	...	...	...
Norwich	85827	11·5	45	33	63·5	41·0	50·8	10·45	0·63	1·60
Plymouth	74993	53·8	59	33	64·6	40·1	51·9	11·08	0·38	0·97
Bristol	213536	48·0	134	79	62·0	38·7	49·2	9·55	0·49	1·24
Wolverhampton ...	75970	22·4	55	31	64·2	38·5	48·4	9·11	0·91	2·31
Birmingham ...	394738	47·0	290	125	65·1	42·5	51·0	10·56	0·89	2·26
Leicester	129912	40·6	93	47	68·2	37·5	49·4	9·66	0·95	2·41
Nottingham ...	173627	17·4	140	70	70·6	35·5	50·2	10·11	1·00	2·54
Liverpool	544056	104·4	468	255	...	...	...	...	...	...
Manchester ...	363130	84·6	273	163	...	...	...	...	...	...
Salford	185786	35·9	151	75	...	...	...	...	...	...
Oldham	115413	24·7	82	50	...	...	...	...	...	...
Bradford	197196	27·3	123	53	65·2	39·0	50·2	10·11	0·75	1·90
Leeds	318929	14·8	253	131	67·0	40·0	50·8	10·45	0·53	1·35
Sheffield	304938	15·5	219	113	65·0	37·5	49·3	9·61	0·74	1·88
Hull	149627	41·2	104	51	69·0	39·0	50·7	10·39	0·54	1·37
Sunderland ...	116730	42·2	93	40	72·0	43·0	52·5	11·39	0·17	0·43
Newcastle-on-Tyne	149366	27·8	97	67	...	...	...	...	...	...
Edinburgh	229839	54·8	169	89	72·6	40·7	52·3	11·28	0·39	0·99
Glasgow	589598	97·7	403	241	...	...	...	...	...	...
Dublin	314666	31·3	201	227	66·5	37·5	52·8	11·56	0·68	1·73
Total of 23 Towns in United Kingdom	8633571	39·2	6094	3344	72·6	35·5	50·8	10·45	0·62	1·57

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·88 in. The highest reading was 30·26 in. at the beginning of the week, and the lowest 29·70 in. on Thursday afternoon.

* The figures for the English and Scottish towns (except for Nottingham, Salford, and Oldham) are the numbers enumerated in April, 1871, raised to the middle of 1880 by the addition of nine years and a quarter's increase, calculated at the rate which prevailed between 1861 and 1871. Revised estimates have been adopted for Nottingham, Salford, and Oldham, based upon special returns of inhabited houses existing within those boroughs; the population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE ON A CASE OF CEREBRO-SPINAL MENINGITIS, WITH AUTOPSY.

By C. HANDFIELD JONES, M.B. Cantab., F.R.S.,
Physician to St. Mary's Hospital.

L. B., female, aged nineteen, married, admitted on December 31, 1879. A healthy-looking person. She was married last June; her husband left her three weeks after, and is now in gaol for not supporting her. Catamenia ceased last September. She was quite well on 27th; was taken ill on 28th. Her first symptoms were headache, pain in the arms, and drawing up of the legs, with vomiting. The disorder in the limbs lasted about thirty hours; the vomiting seems to have been more or less frequent the last three days (she says she has been very sick), and recurred again this morning. The headache has got worse; the pain extends across the temples, and, in fact, all over her head, and is felt also in the back. She is moaning with pain in the head now, and feels very weak and depressed. Breasts large. She is pregnant; about four months gone, she thinks. Pulse 60, irregular and weak. Temperature 100·6°. Tongue clean. No appetite. Bowels open. Thirsty. Not much epigastric tenderness. The diagnosis was felt to be doubtful; but it was determined to act on the view of the pain being neuralgic, and quinine gr. v., acid. s. dil. ♏vj., spt. chlorof. ♏x., aq. ℥j., ter die, was ordered, and three ounces of port wine. A subcutaneous morphia injection of one-eighth of a grain was given, and repeated in the course of the night, but it was passed, nevertheless, in great suffering, which continued until the morning, when she had a quarter of a grain more, which procured some nice sleep.

January 1, 1880.—4 p.m.: The pain now is much less in the head—it is, she says, only a dull pain; but there is severe pain all down her spine, quite to the sacrum. She was very sick this morning, and vomited a dark fluid; her nose also bled to a small amount. She has still some tenderness at left vertex. She cannot hear my watch on either side until it almost touches the ear. She never had any discharge from ears. She is quite rational. An ophthalmoscopic examination was made: the fundi were of a deep red, and the discs appeared hazy. Pulse 78, jerking, somewhat irregular. Temperature 100°. A small patch of herpes was noticed on chin. Urine was full-coloured, not albuminous, specific gravity 1029; threw down lithates when nitric acid was added. The quinine was replaced by potass. iod. gr. iij., mist. pot. citrat. ℥iss., quater die.

2nd.—Is groaning a good deal now; sister says she always groans more when I come into the ward. She was sick after calomel gr. v. given yesterday at 5.40 p.m.; was then comfortable until 9.40 p.m., when she had jalapæ gr. xx., and soon after was sick again. She passed a fairly good night, but was very thirsty; drinks a great deal. Is perfectly rational. Complains of pain in her legs now, but the back is very much better, and the head also; the latter, however, is much retracted. Both fundi of eyes well seen, are quite red; both discs are decidedly hazy. Face pale, lips red; breath offensive. Bowels not open. She was sick a little this morning, and had some epistaxis both last night and this morning. Ol. crotonis ♏j., aloes gr. ij., in pil. ad sedes. Calomel gr. ¼ 4tis horis.

3rd.—Bowels moved five times after she had taken three of the croton oil pills (at intervals). She was very much relieved by their action; a great deal of undigested-looking stuff came away. Less retraction of head; but this morning had the aspect of a person in a fit, though she was not rigid. Not the least delirium. Says she has no pain in head, but much in right leg and back in all its extent. Tongue inclined to be dry. Is very thirsty. Pulse 96, of fair size, regular. Has a troublesome cough. Good resonance and entry of air in both backs.

4th.—Night pretty good. Much pain in sacral region and all along spine, and this morning in both legs. Nothing morbid apparent in legs. Moving brings on pain in trunk and legs. Pulse 124. To have twelve leeches along spine.

5th.—She passed a good night, but pain came on again this morning in spine and in shoulders, and in neck and head to some extent. Head is very much retracted. Spine arched in opisthotonos. Three croton oil pills were taken, with very little effect. At 10.20 a.m. had a severe rigor lasting ten minutes; temperature then 100·4°. A second rigor, longer and more severe, occurred at 11.30 a.m.; the temperature then was 103°. Sensation was lost in feet for a time this morning, but it has now returned (3 p.m.). Omitte calomel, pt. c. mist., sodæ salicylicatis ℥ ss., m. c. ℥j., o. h. ad vices 6.

6th.—Passed a comfortable night, but began to have pain in spine again betwen 7 and 8 a.m., and is now crying out almost constantly. Temperature all night not above 98°. Complains of tenderness all over head, but has pain only across upper and back part. Sister says the pain seemed to be quite removed by the salicylic mixture. Can move all her limbs. Had one rigor this morning at 9.45; temperature then 100·8°. Pulse 108. At noon one-third of a grain of morphia was given subcutaneously. No sweating. She vomited last night and this morning. Discs in both eyes are tolerably normal, less hazy than they were on the 1st; the surrounding fundus is of a full red. Chloral gr. xxx. was given at 4.30 p.m.

7th.—Passed a very good night; was easy at 8 a.m., slept till 9.30 a.m., then began to complain of pain in chest and lower abdomen, and about midday of pain in back and legs; says that she has most pain in thighs, and that her head was very bad in the morning. No rigors. Wanders a little when left to herself, but is quite rational when spoken to. Moves all her limbs. Tongue moist, clean. Feet sensitive. Temperature throughout night 96°. Had chloral gr. xxx. at 4 p.m. and 7.40 p.m. Urine in fair quantity and of natural appearance.

8th.—Had a warm bath last night, and enjoyed it much; slept well after. Has pain in various places to-day, not constant in any one. Takes four pints of milk a day, and ℥ss. doses of salicylicate.

9th.—Last night she got out of warm bath quite by herself, had a very good night, has had no rigors; is moaning with pain in back now (3 p.m.); takes nourishment well—two eggs and four pints of milk. At midsternum a blowing systolic murmur is heard, louder at left second cartilage than at right. Pulse 78, rather weak, not regular. Temperature not above 99°. No reflex movements occur on tickling soles. Pot. iodid. gr. ij., spt. ammon. co. ♏xij., dec. cinch. ℥j., t. d.

10th.—Is worse to-day; night restless; warm bath did not relieve; much pain in back; murmur as yesterday. Rept. salicylicas, omittur alia.

12th.—Was in great pain on night of 10th, not sleeping more than twenty minutes at a time; the pain continued during the day (11th) until she had twelve leeches to the lower part of spine at 3 p.m., after which she became easier, and passed a fair night with tr. opii ♏x.; she had had ¼ gr. of morphia subcut. in forenoon. Calomel gr. v. was given at 5 p.m., and at 9 p.m. ♏j. of croton oil, aloes gr. ij. Five such doses were given altogether before the bowels moved about 4 p.m. of 12th; the stool was large but not lumpy. The leech-bites bled much. She has hardly spoken all day; only a word or two in reply to questions. Back much arched, and head retracted. Pupils much dilated this morning; are now (4 p.m.) more natural. Limbs were rigid this morning. Urine all passed in bed. Temperature normal. Uterus felt high up in pelvis, neck short, os closed. Pulse on 11th, 60, irregular, and is now 80, pretty regular.

13th.—No pain since yesterday, but is quite unconscious; does not answer questions; looks up at me with a vacant expression. Right side of face and right limbs paralysed. Fluid escapes from right corner of mouth. The hemiplegia came on in night. Pulse 80. Pupils rather large. Head not retracted to-day, nor back arched. Bowels acted four times in night, and once to-day; in all, seven times from pills given on 11th. Mouth not at all sore. Head to be shaved and blistered. Calomel gr. ¼ 4tis horis. Potass. iod. gr. x., pot. nitrat. gr. x., mist. ammon. acet. ℥j., ter die.

14th.—Is quite comatose. Pupils dilated. Conjunctivæ insensible to touch. Breathing stertorous and rapid; 70 at 3 p.m. Pulse full, quick, and regular; 120. Moves left

limbs occasionally; right are quite powerless. Cannot swallow. Face pale. Temperature in right axilla 101·2°, in left 102·5°. Died next morning. Abortion occurred just before death.

Post-mortem, forty-four hours and a half after Death.—Dura mater normal. No distinct flattening of convolutions. Veins of convex surface and venous sinuses not notably distended. A little sero-purulent exudation in Sylvian fissures, and a good deal in median excavation of base. At the posterior part of the cerebellar hemispheres, near the posterior median notch, there was on each side a patch of purulent lymphy exudation of irregular shape, about one inch by half an inch, lying, like the others, beneath the arachnoid. The margins of the great longitudinal fissure, of the median fissure at the base of cerebellum, of the Sylvian fissures, and of the transverse fissures were glued together, though there was no very apparent lymph in these places. Substance of cerebral hemispheres generally is fairly firm. No fluid in lateral ventricles (they were not examined *in situ*). Inner surface of ventricles and posterior pillars of fornix were softened, but there were no glomeruli in these latter parts, nor were the minute vessels coated with granular exudation. No tubercle was seen. On opening the dura mater sheath of the cord some opalescent fluid escaped. This under the microscope showed numerous very delicate, finely-granulous corpuscles of about the size of those of pus, but much less distinct. The cord itself was very hyperæmic, but no lymphy exudation was found upon it. The lungs were healthy—right weighed eight ounces, left nine ounces. Heart weighed nine ounces. Mitral and tricuspid valves were fairly healthy. Aortic orifice small, two inches and a quarter in circumference. Aortic valves showed traces of former inflammation: the flap covering the right coronary artery being much contracted and somewhat thickened; the flap covering the left coronary artery had undergone similar slight change at the point of attachment to the flap on its right. The remaining flap is enlarged to correspond with the contraction above mentioned. The pulmonic valve shows similar evidence of old valvulitis, but to a much more limited extent. Muscular tissue quite healthy. Liver weighed forty-eight ounces, was somewhat softer and paler than normal. Spleen was normal, weighed four ounces. Kidneys were normal; right weighed five ounces, left four ounces. Uterus enlarged, undergoing involution after abortion; measured five inches and a half in length by three in breadth; its substance pale, uterine and ovarian veins filled with dark blood. Left ovary contained a corpus luteum, which measured three-quarters of an inch by five-eighths of an inch.

Comments.—Our first remark may be that there was no very apparent cause for the malady. No external injury had been inflicted, and the post-mortem discovered no miliary tubercles. Certainly she had suffered considerable mental distress from her unhappy marriage, which may have predisposed her nervous centres to morbid action. But in ninety-nine cases out of a hundred the result of such influence alone would not have been cerebral inflammation, but some functional derangement—chorea, or hysteria, or melancholia. As to exciting causes, it may be remarked that *influenzal catarrh* was prevalent at the time she sickened, and that influenza seems to be a very possible cause of meningitis. Dr. Brown mentions the occurrence of three fatal cases of meningitis in adults, Dr. Hastings another, and Mr. Appleton states that inflammation of the spinal marrow occurred in some cases which had not received early attention. I have recorded in the *Medical Press and Circular* a case of my own where meningitis with sero-purulent exudation supervened directly on a relapse of a catarrh. It may not be a mere coincidence that a case under the care of one of my colleagues, suffering with persistent jaundice produced by cancer of the liver, died a few days before L. B. did, of purulent meningitis. Some epidemic influence, then, may have been one factor of our patient's malady. And this suggests the next remark, that an affinity may be traced between her condition and that existing in sporadic cases of *cerebro-spinal meningitis*. In the severe and most extensive rachialgia from which she suffered, in the retraction of the head, in the herpetic eruption, perhaps in the epistaxis, and more certainly in the dissection results, there is a manifest resemblance. Though the spinal meningitis was slight, yet there were indications that it really existed, and the pathological condition was therefore not simply one of cerebral disease. The shifting of the pain on the fourth day from the head to the spine is rather suggestive of *rheumatism*, and so is the good effect produced by the salicylicate, and the very moderate amount of the inflammatory lesions, and still more the traces of former valvulitis. Ignorant as we are of the cause of rheumatism, our "*maladie de pays*," as well as of that of influenza, and that of cerebro-spinal meningitis, we cannot tell how far these unknown agencies may be related to each other, and, undergoing various modifications, may operate now in one guise, now in another.

Lastly, it might be questioned, and it was, whether the symptoms were not the *outcome of the pregnancy*. The nervous troubles which a gravid uterus is capable of originating are legion, and severe rachialgia seemed quite as likely to be one of them as gastric hyperæsthesia or tubular nephritis.

The *diagnosis* of the malady at first presented some difficulty quite apart from any question as to its actual nature. The point that pressed for determination was whether the disorder, however caused, was inflammatory or neuralgic. In favour of the former view were the vomiting with but little epigastric tenderness, the slowness and irregularity of the pulse, and the (rather slight) elevation of temperature. On the other side were the great depression and the mental distress she had experienced. The next day, however, in spite of the great mitigation of the pain in the head, evidence was adduced by the ophthalmoscope which strongly supported the view that inflammation was present. The deep red colour of the fundus, and the haze surrounding the disc, contrasted strongly with the appearances in a case of manifest neuralgia of the head I had examined a few days previously, where the fundus was pale and the discs well defined.

Looking next to the *various symptoms*, we may remark (1) that the *obstinately confined state of the bowels*, yielding only to strong purgation by croton oil, was very characteristic of cerebral inflammation. (2) The *absence for the most part of high temperatures* is noteworthy. Except during a severe rigor on 5th, when the thermometer marked 103°, and an altogether exceptional reading on the previous morning (perhaps also connected with a latent rigor), the temperature was only twice observed as high as 101°. I am inclined to connect this feature with the existence of severe pain; for, though there are undoubtedly exceptions, yet for the most part severe neuralgic pain is not associated with pyrexia, as Dr. Radcliffe contends. Πυρετος σπασμους λυει, says Hippocrates. The higher temperature reading in the left than in the right axilla shortly before death is an anomaly which I cannot explain. (3) The *retraction of the head*, which was so marked a symptom in L. B., is frequently met with in epidemic cerebro-spinal meningitis, but is not much noticed by writers in their accounts of simple or tubercular meningitis of the encephalon. Ollivier regards retroversion of the head and trunk as one of the two pathognomonic signs of acute spinal meningitis. As our notes do not specially mention retroversion of the head as being present on the day of her admission, when pain in the head was much more severe than pain in the back, we ought probably to attribute this symptom to the spinal rather than to the cerebral affection. My own experience has inclined me to look upon retroversion of the head—the spine being exempt—as a very suspicious symptom of cerebral meningitis, perhaps most often present in ventricular. Andral's figures, however, show that in nineteen cases where this sign was present there was lesion of the ventricles in ten only, so that this locality exerts no very special influence in its production. (4) The *tenderness* of the spine on pressure deserves notice as an indication of the quality of the morbid action. It was tolerably well marked, but was not extreme. This symptom is rarely present during the most acute rachialgia of cerebro-spinal meningitis (*vide* "Reynolds' System," vol. ii., 681), and is mostly awanting also in ordinary myelitis and spinal meningitis; whereas it is highly developed in the neurosis termed spinal irritation, where there is certainly no inflammation. Its presence, therefore, in our case testifies to the slightness of the inflammatory process, and harmonises with the very scanty traces of inflammatory exudation found on dissection. (5) The rigors must be looked on, I presume, as a kind of spinal convulsion induced by excessive irritability of the cord, and constituting another evidence of the existence of a highly neurotic element in the malady. (6) The almost entire *absence of delirium* accords well with the post-mortem finding. There were very little traces of

inflammation on the convoluted surface of the cerebral hemispheres, but plenty in the median excavation at the base between them, and at the back part of the cerebellum. Andral's statistics show very forcibly how almost invariably delirium occurs when the surface of the hemispheres is affected in meningitis. Out of twenty-eight cases there were only two where delirium existed, when the cerebral lobes were intact. We must remember, however, that delirium is not caused (any more than other disorders) by inflammation only, but also by toxæmia, or remote irritation, or by exhaustion. (7) The *absence of paralysis* until near the fatal termination is also consonant with the results of dissection. Neither of the cortical motor areas were notably damaged, nor were the basal ganglia, nor the crura cerebri. But then the question presents itself, Why did hemiplegia ensue on the last day but one before death? And with this may be joined the further question, Why did coma supervene at the same time? These questions cannot in our case be fully answered, but I incline very much to agree with Brown-Séquard that the various symptoms produced by intra-cranial lesions are by no means *necessarily* dependent on damage to the structure of the parts whose function is abolished, but that morbid impressions conveyed to these nerve-centres are capable of throwing them out of working order, *i.e.*, of producing an inhibitory paralysis. Such paralysis is more likely to occur in proportion as the vital energy of the system becomes feebler, and less capable of resisting injurious influences. Therefore I believe it possible that in our patient the hemiplegia and the coma were caused by irritation proceeding from the posterior part of the cerebellar hemispheres, where sero-purulent exudation had taken place. I do not assert that this was so; because it is quite possible that the coma was toxic, and directly induced by the exciting cause of the malady affecting the brain-cells, and that the hemiplegia depended on embolism of the left middle cerebral artery, which unhappily we omitted to search for. Some of Andral's remarks accord very closely with Brown-Séquard's views. He says (*vide* page 50 of Spillar's translation):—"Lesions of motion are more frequent in meningeal affections than those of sensation, but they are not more constant, and they are entirely wanting in cases where, after death, the same structural lesions are found as in the cases where those lesions (of motion) have existed." Again—"The different facts, which have now been analysed, lead us to a singular conclusion—viz., that with similar lesions of structure in the dead body the most varied disturbances in the function of motion are found to coincide. . . . Thus, beyond that lesion which the scalpel points out to us as having its seat in the membranes of the brain, there is in the brain itself a modification not recognisable by the anatomist, which is produced, to be sure, by the lesion of the membrane, but which, variable in each individual, is the real cause of all the functional disturbances which are seen to supervene."—(Page 54.) (8) The *rapid respiration*, 70 per minute, during complete coma, is not what we should have expected, but it is by no means a rare occurrence. It may be explained on the ground that carbonic acid accumulating in the blood is a potent stimulus to the inspiratory centre; but this view seems contradicted by the facts that patients dying with engorged lungs and dusky face, whose blood must be surcharged with CO_2, have nothing like such rapid breathing; and that L. B.'s face was by no means dusky during the period referred to. I am disposed rather to regard it as due to a special hyperexcitability of the inspiratory centre, which precedes, as is often the case, a total loss of power.

As to the *treatment* adopted little need be said. The salicylicate was the only drug which seemed decidedly beneficial; it might perhaps have been pushed further with advantage. Purging was thoroughly performed, but did not seem of much avail. I fear we must admit that the treatment of meningitis at present is very far from satisfactory. Abercrombie's dicta as to the good effects of venesection, hard purging, and cold to the head, corroborated by Sir T. Watson and Dr. Ramskill, as well as by others, refer only (as he says) to a small proportion of those attacked. In epidemic cerebro-spinal meningitis depletion by bleeding or purgatives seems for the most part to have been worse than useless. Stillé speaks highly of the good effect of opium (gr. j. o. h., vel 2dis h.) administered early in this disease. When exhaustion appears imminent, or rigors occur, quinine has been found very valuable. Even in sporadic meningitis cases are met with, according to Sir T. Watson, where wine and stimulants avail when other means have failed. From the above facts, and from our experience in other maladies, it seems to me that some discrimination should be attempted, in undertaking the treatment of a case of meningitis, as to the *quality* of the disorder, whether it be sthenic or asthenic, whether the inflammation is of a low erysipelatoid kind or the reverse. I am speaking now of non-tuberculous meningitis. But this is not all that we have to consider. The *mode* in which the symptoms are produced seems very important. For the disease does not prove fatal, at least in the great majority of cases, by destroying some organ (nerve-centre) necessary to life; nor at any rate, as I think, by squeezing the encephalon or parts of it by exudation; but by setting up inhibitory irritation, which first disorders and then paralyses vital nerve-centres. Thus we have pain, delirium, and coma; convulsions and paralysis; rapid respiration and its cessation; rapid heart-action and failure—all indications of morbid excitation succeeded by collapse. The heart is brought to a standstill, not by weakness of its own muscle, nor by defective supply to the left ventricle from the engorged pulmonary vessels, but by disordered innervation. Could the respiratory and circulatory nerve-centres be liberated from the irritation to which they are subjected, the inflammatory process might run its course, subside, and the exudation disappear, just as occurs in pneumonia or pericarditis or peritonitis. The chief aim, then, of our therapy should be, I conceive, rather to calm irritation than to subdue inflammation. Peritonitis seems to me an analogous instance. Here we know the main danger lies in collapse, in failure of the heart's action inhibited by the morbid impressions carried from the inflamed serous membrane by the splanchnic and other nerves, along the cord, and reflected on the cardiac ganglia. To mitigate these, produced of course by the inflammation, we know that leeching the abdomen in tolerably vigorous persons is useful. But we put our main trust in the free use of opium, which, as J. Hunter well says, does good by preventing the disease from doing harm—*i.e.*, narcotises to a certain extent the cardiac nerve-centres, and renders them less vulnerable by the morbid impressions. The treatment of burns by the warm bath and opium is quite a similar instance. Much in the same way, I suspect, we should deal with meningitis. Sir T. Watson writes respecting acute hydrocephalus:—"When there is much irritability towards the decline of the disorder, or in its latest period, opiates may be cautiously tried; they sometimes have appeared to be extremely beneficial." Stillé does not find narcotism produced in the epidemic malady by the very free exhibition of opium, and it is not easy to see why it should be otherwise in the sporadic. However, it is not the use of a special drug I am advocating, but the pursuance of what seems to me a rational method. Bromides or other drugs might be better than opium in some cases, but in the one I have now related to you, where severe pain was so prominent a symptom, I much regret I did not use opium far more freely.

L. B.—*Temperature Table.*

1879.	a.m.	p.m.	1880.	a.m.	p.m.
Dec. 31 (3 p.m.)	—	100·6°	Jan. 6 . .	99·4°	96°
„ „ (9 p.m.)	—	99·4	„ 7 . .	100·7	98·6
1880.			„ 8 . .	101	98
Jan. 1 . .	100°	98	„ 9 . .	99	101
„ 2 . .	99·4	100·4	„ 10 . .	99·7	97·8
„ 3 . .	101·4	100·2	„ 11 . .	99	97
„ 4 . .	103·9	97·8	„ 12 . .	98·6	97·8
„ 5 . .	98·4	97	„ 13 . .	99·8	98·8

Table of Readings during administration of Salicylicate of Soda on January 5 (five doses given).

p.m.	Temperature.	p.m.	Temperature.
At 3.30 . . .	102·4° (1)	At 6.30 . . .	99·8° (4)
„ 4.30 . . .	100·4 (2)	„ 7.30 . . .	98·2 (5)
„ 5.30 . . .	99·4 (3)	„ 8.30 . . .	97

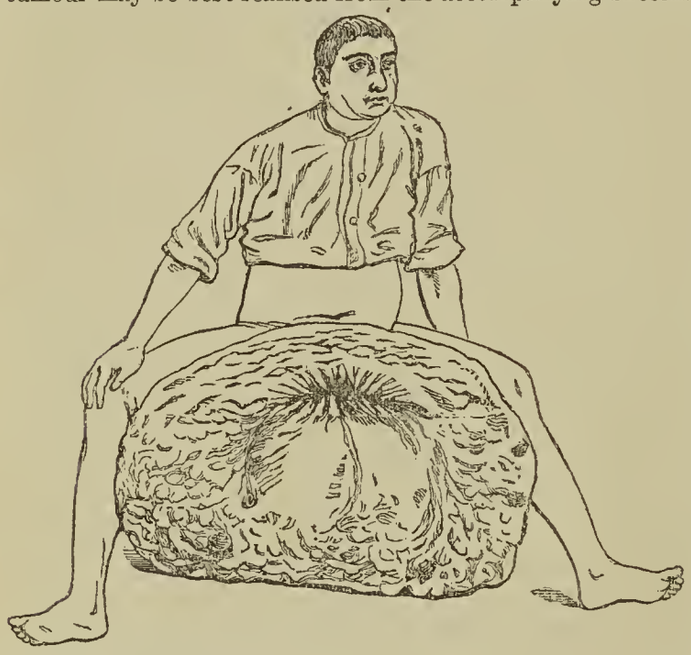
Formula in Chlorosis.—For nervous and hysterical women with impoverished blood, Dr. Siredy recommends the following mixture:—Citrate of iron, 5; bromide of potassium, 10 to 12; and Malaga wine, 250 parts by weight. A tablespoonful to be taken at the commencement of the two principal meals.—*Union Méd.*, June 8.

ORIGINAL COMMUNICATIONS.

REMOVAL OF SCROTAL TUMOUR.

By S. B. PARTRIDGE, F.R.C.S. Eng., F.R.C.S. Edin.,
Late Professor of Surgery, Calcutta Medical College, and Surgeon of Medical College Hospital.

Lattoo Pal, aged fifty-five, a Hindu shopkeeper, resident in the Burra Bazaar, Calcutta, was admitted into the Medical College Hospital, Calcutta, on November 10, 1879, suffering from a large scrotal tumour. The growth seems to have commenced soon after puberty, and to have progressed but slowly for some years, its progress being accompanied by the usual periodic attacks of fever, but not otherwise interfering materially with his general health. During the last nine years the rapidity of increase had been more marked, and the enormous size of the tumour had proved latterly a great inconvenience to him. At the time of his admission he was in fairly good health, somewhat anæmic-looking, but free from all traces of organic disease. The dimensions of the tumour may be best realised from the accompanying sketch.



In the erect posture it reached to within six inches of the ground, and necessarily interfered very materially with his powers of locomotion. He could, however, walk a distance of half a mile and stand for a considerable period without much difficulty. In his ordinary sedentary occupation as a shopkeeper he was in the habit of making use of the growth as a desk for writing on. Some slight excoriations on the surface he attributed to rats having gnawed the growth on one occasion whilst he was asleep—an explanation supported by the fact that the sensibility of the hypertrophied integument was certainly diminished. A careful examination of the inguinal regions proved the absence of hernia, a complication which, though not absolutely contra-indicating an operation, still very materially adds to its risk. The tumour was removed on November 14, under the influence of chloroform, the method of proceeding being the following. For about half an hour the patient was placed on the table in a recumbent position, with the tumour raised and partially supported on pillows, for the purpose of diminishing, under the influence of gravitation, the amount of blood circulating through it. The whole growth was then evenly bandaged with india-rubber bandages to still further exsanguinate it, but the pressure employed was purposely only moderate, for fear of overtaxing an already rather weak heart. Four strong tapes were then applied longitudinally to the neck of the tumour—one in front, one behind, and one on either side,—and around these three turns of a strong india-rubber cord firmly fastened; by means of the tapes the constricting ring thus formed was readily fixed to a broad, well-padded leather waist-belt, tension being applied backwards between the buttocks, forwards in the median line, and laterally behind the thighs, so as to draw the ring well into the outlet of the pelvis, and especially under the ischial tuberosities and under the curve of the pubic arch. By this means the vessels supplying the tumour were held well under control, and the constricting band at the same time drawn beyond the line of the necessary incisions. The india-rubber bandages were next removed, and the operation proceeded with. With the guide of a strong steel director introduced into the preputial orifice, the glans penis was first exposed, and the incision continued in the median line towards the symphysis pubis, beyond the limits of the hypertrophy, and to a depth sufficient for the exposure of the dorsum of the penis, which organ was then dissected out by two free lateral longitudinal incisions, each commencing at the external abdominal ring and extending to the bottom of the tumour. The spermatic cords and testicles were next exposed, separated, and raised, the testicle on the right side being readily found in consequence of the existence of what in England would be called a gigantic hydrocele, but that on the left discovered with a little more difficulty by tracing downwards into the mass the structures of the cord. The commencements of the incisions near the pubis and beyond the line of the hypertrophy were then joined transversely, the penis and testicles being held out of the way by the assistants, the circumferential limits of the disease, laterally and behind, next marked out by a free cutaneous incision, and the whole mass removed by a few more touches of the knife. To facilitate the handling of the enormous mass a sort of tray was made by folding a sheet and tying it at the four corners, and with the aid of this an assistant at either side readily raised or depressed the tumour as required. At the time of the first incision there was a considerable escape of venous blood, but the remaining portion of the cutting operation was absolutely bloodless, and from beginning to end certainly not more than five or six ounces of arterial blood were lost. After the separation of the tumour the operation was completed by removing all traces of the prepuce (which, if left, invariably hypertrophies), and also excising the greater part of the redundant tunica vaginalis on the right side. The vessels were large and very numerous, requiring no less than sixty-four catgut ligatures, but they were so completely controlled by the elastic ring that no difficulty was experienced in securing them without any material loss of blood. In dressing the wound I adopted a plan I have long been in the habit of employing for insuring adhesion of the testicles in a good position and preventing their overlapping the margins of the adjoining integument; such a faulty position, if allowed to develope itself, tends to considerable delay in the healing of the wound. To avoid this I evert the edges of the incision by means of three stout catgut sutures on either side passed round tapes embracing the fold of the groin and thigh; they occasion little or no inconvenience, and are readily removed at the first dressing, two or three days after the operation. The patient was carefully weighed before being operated on, his weight being 276 lbs.; the tumour after removal proved to be 111½ lbs.: so that, without making allowance for the contents of the hydrocele, etc., the mass removed fell but little short of half his original weight. He bore the operation admirably; there was a slight fall of pulse and temperature for a few hours, but he rallied well, and his progress towards recovery was subsequently steady and uninterrupted. When I left Calcutta, on December 31 last, the patient was doing well, and I have since learned that he was discharged cured on February 4.

In the removal of very large scrotal tumours the principal risk to the patient is the shock produced by the sudden and excessive loss of blood. The plan above described of minimising this loss was first introduced by me into the Medical College Hospital in January, 1874, but I believe a very similar method was adopted about the same time independently elsewhere by my old friend Dr. Cayley, now Surgeon of the Mayo Native Hospital in Calcutta.

French Herborists.—The Conseil d'État is considering the propriety of abolishing the title and diploma of herborist, whether to render the "profession" a free one, or to transfer the little monopoly of the *herboristes* to the *pharmaciens* is not known. According to the most recent returns there are now 983 diplomated herborists in France, of which number 729 are found in the Department of the Seine. In thirty-eight departments there are no herborists, and in sixteen only one each, all inhabiting large towns. It is in the poorest quarters of Paris that the herborists are chiefly found.—*Union Méd.*, June 8.

REMARKS ON ACUPUNCTURE,

WITH CASES.(a)

By SIMEON SNELL, L.R.C.P., M.R.C.S.,
Ophthalmic Surgeon to the Sheffield General Infirmary.

THE cases to which I am now about to refer all occurred some years since, and had lain almost forgotten in an old note-book, until quite recently, coming again before me, it seemed to me that they might prove not uninteresting if I brought them under the notice of this Society with some remarks on the subject of acupuncture generally.

Acupuncture, consisting of the introduction of needles in various parts of the body, appears to have been practised by the Chinese and Japanese from time immemorial, but was only introduced into Europe by a Dutch surgeon about a couple of hundred years since. At the early part of the present century it was a good deal used in England, and among others found a warm advocate in the erudite Dr. Elliotson, so well known as the enthusiastic but misguided supporter of mesmerism and the sisters Key. His article on Acupuncture in the "Encyclopædia of Practical Surgery" is, I believe, still the only good one on the subject in our books, and its perusal will well repay those in any way interested in the subject. At the Leeds Infirmary the use of it is almost traditional; it was there I both saw it employed, practised it myself, and witnessed the remarkable benefits frequently resulting.

The needles generally employed are long, slender, and sharp-pointed, and furnished with a head or small handle of ivory—like the one I show you. A large sewing-needle answers the purpose. Care should, however, be taken to prevent the possibility of its slipping beneath the skin, by placing on it a head of sealing-wax. The needles are generally made of steel, but silver and gold have been used, more particularly in the East. The Japanese are said to be bold in the use of these needles, and plunge them into the various viscera, and even into the fœtus in the womb to repress its tumultuous movements. Their efficacy was undoubted in maladies, as they said, dependent on the wandering about of winds or vapours.

The operation is performed by pricking the skin and gently pressing the needle onwards, in, as some advise, a rotatory manner. The place chosen is the seat of pain. A minute or two will suffice for the needle to remain in the part, though it has been thought better by some for it to be a longer time. Again, only one needle may be plunged into the affected region, or as many as half a dozen. I have seen both a single needle and several needles used, but as I saw no better results in those cases in which a large number were employed, it was always my practice to use a single one.

Now as to the uses of this procedure. The benefit following acupuncture in anasarcous limbs, by allowing the exit of serum, is well known; as are also the capital results often achieved by making numerous punctures in a hydrocele with one of these needles, and permitting the fluid to escape into the areolar tissue, and become absorbed. I have seen benefit from this method in children.

But the cases in which the effects of acupuncture are often so strikingly brilliant are in a different category from these, and the *modus operandi* is not the same. Those I am going to relate will illustrate its use in cases of weakened deltoid from laceration or otherwise following dislocation, or from a fall on the shoulder; another case, its benefit in chronic rheumatism. It has been recommended in rheumatic and neuralgic affections generally. These are the class of cases I have seen it practised in, and in most instances with brilliant results. Like every other remedy, it has been put to ridiculous uses, and it was even suggested that the running of a large needle into the right ventricle in cases of asphyxia might be beneficial! But as its employment is attended with but little pain, and that it is but seldom that any ill effects result from it, it is scarcely surprising that enthusiasts should have carried its use to absurd lengths. The employment of the aspirator in tapping a distended bladder, and its other uses, has additionally proved the little harm resulting from the insertion of a small, clean needle into different parts of the body. It is worthy of note, however, that, whilst the Japanese plunged these needles into the abdomen and other important regions of the body, it would appear that they always avoided the neighbourhood of joints.

I will now relate the particulars of cases of which I have kept a record:—

Case 1.—T. G., aged thirty-five, on January 23, 1872, stated that a week previously he had fallen, striking his hand and arm. He also said "his hand was now all right, but he could not move his shoulder much." He was able to lift the elbow from his side, but only slightly to raise it, and could reach the hand across the front of his chest, but only a little distance behind his back. Putting his arm backwards he could only reach the upper part of his neck with the hand. One acupuncture needle was introduced through the deltoid towards the outer side and rather above its insertion—followed by marked improvement. He now fixed the pain more to the inner side of the deltoid, so the needle was introduced again, the man exclaiming "That is the place!" In a very few minutes he could raise the arm up quite straight, touch the top of his head easily, and in fact move it just as well as the other.

Case 2.—J. A., aged sixty-six years, who was under treatment for capital neuralgia, mentioned one day in February, 1872, that eight months previously he had been chasing another man, and had fallen on his shoulder, hurting it much at the time, and since then he had been unable to use it properly. He could raise the arm so as to touch the head on slightly inclining the head towards the affected right side, but only a little at its back part. Rotation was performed very imperfectly and with pain. Extended he could not raise the limb above the level of the shoulder. An acupuncture needle was plunged in at the lower edge of the spine of the scapula at its anterior part. This was followed by great relief; but the needle was introduced again into the deltoid just above its insertion. Directly after this he could raise his arm better, and rotate it without pain.

Case 3.—About this same time a man was attending to have his deltoid faradised. There was a history of injury to the shoulder. Six weeks' treatment produced no improvement. Movement was imperfect, and he could raise his arm very little. He was acupunctured with marked benefit.

Case 4 was a man under treatment in July, 1871, and who (to use his own expression) had been under all the doctors in the neighbourhood, with no benefit. He had injured his shoulder, and had been treated with various liniments. When seen, he was able to move and raise the arm very little. An acupuncture needle was introduced once into the deltoid, and he could afterwards move the shoulder a great deal better. A fortnight later he said he could move the arm as well as the other.

These are cases of muscular disability, and I now relate a case of chronic rheumatism:—

Case 5.—In the early part of 1872, whilst taking charge of one of my brothers' practice, I had occasion to visit an old patient, aged sixty-eight. She was a sufferer from rheumatism. One day she said, "I am quite well now, if it were not for my right shoulder." It appeared that for eighteen months or two years it had been more or less useless. She could now raise the arm a very little from her side, and could stretch the hand across her chest very imperfectly, but could not get the hand at all near the head. A needle was passed into the deltoid near the centre, followed by her being able to raise the arm better. It was re-introduced near the insertion of the muscle. In a few minutes she could touch her head easily and raise the arm up quite straight. A week later she could use it as well as the other.

Strangely enough, all the cases of which I have preserved notes are those in which the shoulder was the part acupunctured. In other regions, however, I have seen results equally good.

Concerning its *modus operandi* different opinions have been expressed. It has been supposed that its efficacy in neuralgia is occasioned by the letting out of fluids in the nerve-sheaths by the passage of the needles. My friend and former teacher, Mr. Pridgin Teale, in publishing some interesting cases (*Lancet*, vol. i. 1871), thinks that, at all events in disused and wasted muscles, the mere act of the will being inadequate to force sufficient blood into the muscular fibre to give it tone to act, this defective power of will is supplied by the stimulus of acupuncture in producing a temporary congestion and corresponding increase in the calibre of the vessels and blood-supply. In support of this he mentions that an area of vascular redness is seen round

(a) Read before the Sheffield Medico-Chirurgical Society.

the puncture; but this I have not myself found to be so constant in appearance.

Dr. Elliotson, in the article by him before referred to, remarks that "the effects are not deducible from counter-stimulation, for they are sometimes most remarkable when such stimulation has scarcely been felt; nor from electrical agency, for they are equally produced when the needles are silver or gold; nor from moral agency, for they who deride the curative influence of the needles are as much benefited by their application, provided their cases be suitable, as those who have the most unlimited confidence in their efficacy—the reasoning and incredulous European being in this respect on a level with the all-believing and unlettered Chinese." The impression on my own mind, however, has always been, that in many cases, at all events, the moral has been an important factor in the production of the results. The needle may act as a stimulant to the terminal nerve-twigs in these cases of muscular disability, and thus in some measure account for the beneficial effects. But I believe the most remarkable results I have witnessed in this class of cases have occurred when immediately after the acupuncture the patients were encouraged and urged to do their best in the way of moving the affected parts.

In conclusion, it has always appeared to me somewhat strange, after witnessing so frequently the benefits resulting, that acupuncture is not more generally practised. Except in Druitt—the old friend of one's student-days—it obtains no place in our recognised books. I trust, however, I have said sufficient to show that in certain cases its use is beneficial, and that it still deserves a place among our remedial procedures.

Hand-Pressure in Orchitis.—Dr. Haley, of the Wangaretta Hospital, in a communication to the *Australian Medical Journal* for April, strongly recommends (having found it very serviceable) a new mode of employing pressure in orchitis when the acute stage, by the use of depressants, leeching, etc., has passed into the chronic stage. The ordinary modes of compression are often difficult of application and very uncertain in their operation. The patient having now an enlarged testis, with more or less tenderness, is directed to keep the recumbent posture, and to grasp the affected testis in the hand, employing pressure short of pain, the hand being assisted by the thighs being pressed upon it. This pressure is to be kept up almost continuously, which is readily done, the patient sometimes continuing to make the compression even when asleep. An important adjunct is bathing the scrotum and surrounding parts two, three, or more times a day in cold water. In mild cases, and when the patient cannot conveniently lay up, he should wear a suspensory during business hours, and resort to the hand-pressure whenever possible.

Dental Grafting.—Under this title Dr. David furnishes an account of the investigations on the transplantation of teeth which he has continued since the papers that he and Dr. Magitot published on the subject a few years ago. The following are the conclusions of his paper in the *Journal de Thérapeutique* for May 25:—1. The re-implantation and transplantation of the teeth can only succeed by means of a vital process, that of grafting. 2. *Grafting by restitution*, or re-implantation combined with extraction, is a procedure which allows of our subjecting the teeth to operations which would be impracticable while they remained in the mouth. 3. This procedure is applicable (*a*) for the rectification of certain anomalies; (*b*) for the treatment of certain forms of caries which are incurable by ordinary procedures; (*c*) for the treatment of certain forms of chronic periostitis of the terminations of the root, allowing the affected parts to be excised. Thus we may cure the disease while preserving the tooth in affections which could formerly only be treated by simple extraction, viz., chronic periostitis, as well as the lesions of the vicinity (osteitis, necrosis, fistula, etc.) which accompany it. This procedure has only failed twice in thirty-eight cases. 4. *Grafting by borrowing* (*greffe d'emprunt*) allows of the substitution for a diseased tooth of a healthy one taken either from the person himself (*transposition*) or from another individual (*transplantation*). 5. It is especially desirable to choose for grafting healthy teeth, the extraction of which has become necessary, especially for the purpose of regularising the teeth. 6. Five cases of transplantation have all succeeded.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

UNIVERSITY COLLEGE HOSPITAL.

CASE OF CHRONIC ABSCESS ABOUT HIP-JOINT.

(Under the care of Mr. BERKELEY HILL.)

[From notes supplied by Mr. Dixon, Ward Clerk.]

J. B., aged forty years, a watchmaker, was admitted on January 12. He had old dorsal curvature of the spine, caused, it was said, by a fall when three years old. An uncle on his mother's side had a similar condition of the spine. In April, 1879, patient fell from the step of an omnibus, and hurt his left hip; the part swelled considerably, but there was no tenderness or redness. Two months later (about July) he slipped off a chair, and again slightly hurt the left hip. In October the injured part became both painful and red, and patient attended a doctor, who opened a swelling over the hip, and let out a "core" and about a pint of pus. The wound seems to have at first healed well, but when patient applied to the hospital there was a sinus opening about an inch below the top of the left trochanter, and running under the skin and cicatricial tissue in several directions. No dead bone could be felt with a probe, nor was there any tenderness about the hip-joint or in the spine. There was no evidence of pulmonary disease. The patient was rather pale, and had lost flesh lately. There was no inconvenience except from the discharge, which was very free. Temperature 99°. The following is a brief account of the results of treatment:—

On January 14 a drainage-tube was inserted into the wound, and the parts were dressed with boracic lotion.

On January 19 it was noted that the drainage-tube had at first increased the discharge and irritated the wound; and on January 27 the tube was shortened. The discharge still continued unchanged; the urine was full of phosphates and lithates, but patient's general health had not suffered much.

January 30.—A counter-opening was made in the direction of the sacro-iliac synchondrosis, and a second drainage-tube was inserted. Temperature 98·6°.

February 2.—Temperature 100·6°. Tongue furred; appetite bad; patient very thirsty; pulse frequent, feeble. There was very little discharge from second opening. Patient complained of great general weakness, and the diet was ordered to be a generous one.

7th.—Temperature 101·4°; pulse 120. The opening below trochanter was again enlarged, and during the night about six ounces of pus escaped.

23rd.—The wound had been doing well. The patient had slight diarrhœa since February 12, which was checked by treatment.

March 1.—The wound seemed to be healing very rapidly, and patient was discharged to-day with full instructions as to treatment to be pursued at home.

May 7.—Patient has returned, the wound having opened considerably, and patient's general health being very bad from the long-continued drain.

18th.—Patient is stronger, but the wound continues to discharge very freely. Mr. Hill (patient being under chloroform) inserted a probe, which passed down into the thigh for about twelve inches (apparently going under the deeper fascia). A counter-opening was accordingly made there, through the muscle, and about one ounce of pus came away. There was considerable bagging below the opening near the trochanter, and between this and the upper opening was a sinus of "hour-glass" shape, being wide at either end and very contracted in the middle. A drainage-tube was inserted from each of the outer openings through the sinuses into the central opening near the trochanter. The skin over the trochanter was drawn very tight, and the opening over it was therefore enlarged. No bone could be found to account for the abscess. Temperature, 98·4°.

31st.—Since the 18th the discharge has gradually become less, the sinuses have granulated healthily, and the whole condition of the patient and the appearances of the parts are very satisfactory. The easing of the skin over the trochanter and the more efficient drainage of the sinuses appear to have mainly contributed to this result.

A CASE OF EXCISION OF THE WRIST-JOINT.

(Under the care of Mr. HEATH.)

Josiah M., aged twenty-three years, was admitted on October 6, 1879. In August, 1878, patient, who had been working as blacksmith for about five years, felt for the first time, while at the forge, some weakness in his right wrist. As he had not injured it in any way he paid no attention to this until about a month later, when the joint began to swell and become painful, the most painful part being at the junction of the carpus with the metacarpal bone of the thumb on the palmar aspect of the hand. Notwithstanding the swelling and the pain, patient went on with his work for fourteen weeks longer, until the joint became much more swollen, and so painful that he could not sleep at night. He then sought medical advice, and had blisters applied over the joint, and afterwards used evaporating lotions, which relieved the pain somewhat. He then went into an infirmary, and there the joint was poulticed and the swelling lanced several times, when pus escaped. He afterwards attended as an out-patient until June 25, the same line of treatment being followed; and from that date until admission here he had attended to his hand himself, poulticing it occasionally and wearing the arm in a sling. For several years before he became a blacksmith he was engaged as a labourer on a farm. He had generally enjoyed good health, and never suffered from gout or rheumatism nor had any venereal affection. He had lived most of his life in the South of England and in the country, and had always led a temperate life. Both parents were dead. His mother and one brother had been phthisical, weak, and strumous.

The following are the notes of patient's condition on admission :—"He is a weakly, strumous-looking man, anæmic, and suffers from night-sweats. His temperature is normal; pulse 82, regular, soft, and compressible. There is a painless swelling on the outer side of the right tibia. In other respects, with the exception of the local disease, there is no active mischief in any of the organs. There is considerable swelling over the right wrist, the girth round the joint being three inches more than round the left wrist. The swelling seems to be partly due to bony thickening and partly to the thickening of the soft tissues. No fluctuation can be felt anywhere. The lower ends of the radius and ulna are very prominent. There are sinuses on the palmar and dorsal aspects of the wrist, two on the dorsal aspect being in the middle line over the carpal bones; those on the palmar aspect are about five in number, and are situated over the carpus and lower third of the ulna. The integument is adherent to the extensor tendons, and the hand has fallen somewhat forward. There is very little mobility in the wrist-joint, and there is pain on attempting to move it, but none when the parts are at rest. The diseased joint feels hotter than the sound one. The movements of the fingers and thumb are fairly good.

October 15.—To-day, patient being anæsthetised, and Esmarch's bandage applied, Mr. Heath broke down the existing adhesion about the joint by forcible flexion and extension of the wrist, and then performed Lister's operation of excision. There was very little hæmorrhage either during or after the operation. Several of the carpal bones were found to be soft and carious, and their extraction gave very little trouble. The cartilaginous surfaces of both radius and ulna, and of most of the metacarpal bones, were affected by inflammation. Drainage-tubes being put into each wound, and the edges brought together by silver sutures, the hand was placed on a suitable splint in a semi-flexed position, and with the wrist slightly extended.

18th.—Yesterday, at 3 a.m., the patient's temperature was 103·4°; this morning at 11, 103°. There is a little fœtid discharge from the wounds on both palmar and dorsal aspects. There is a good deal of swelling and tenderness present, especially on the palmar surface of the hand and over the lower two-thirds of the forearm. The wounds are being syringed with weak carbolic lotion. Patient complains of pain in all the joints of his body. He has headache, flushed face, furred tongue, bowels constipated.

20th.—To-day, about four ounces of fœtid pus came away on the dressings. The hand is less swollen and painful, and some granulations are springing up about the wounds. General symptoms are not much altered. Pulse 96; temperature 101·4°.

23rd.—The hand looks swollen and red this morning, especially at the dorsal aspect, near the bases of the inner three fingers, and on the outer side of the thumb, where fluctuation can be felt. Patient has lost sensation at the tips of these three fingers. An incision was made (under an anæsthetic), enlarging the old inner wound, and letting out about three ounces of unhealthy pus; another was made over the base of the thumb, from which a small quantity of dark venous blood, with a little pus, escaped. Bowels open; tongue furred; appetite poor; pulse 90; temperature, before dressing 101°, last night 103°.

26th.—The hand is very much swollen, especially the thumb. All the sutures have come away, and the wounds are granulating. The parts are being carefully dressed, and syringed with carbolic lotion daily. Temperature keeps fluctuating, and patient is weak. He still occasionally complains of pain in his joints, especially in his right knee, but nothing can be made out. To-day, patient being under chloroform, the House-Surgeon cut into the cleft between the index finger and thumb, and let out a large quantity of foul pus. Flexion and extension of the fingers were practised at the same time. Temperature—last night, 102·4°; to-day at 11 a.m., 100°. Patient is taking quinine mixture, and has occasional morphia injections at night.

31st.—An abscess yesterday opened itself in the thenar eminence, which had burrowed from the wound on the same side. Flexion and extension of the fingers were practised to-day, but gave the patient great pain. The temperature has fallen steadily since the 26th, and is now about normal.

November 4.—The wounds look healthier, but the discharge is still profuse. Patient looks more cheerful. The temperature keeps about normal.

8th.—The hand is again more swollen, and there has been more burrowing of pus. Temperature at night 100·6°, normal during the day; pulse 90. Patient has been allowed lately to get up a little during the day, but the hand has been very painful, and he has not been able to sleep without morphia injections.

17th.—The wounds have been going on well. Flexion and extension are practised every alternate day, patient being under the influence of an anæsthetic. Sensation is restored to the tip and sides of the little finger, but is still impaired in the thumb and other fingers and over the rest of the hand. Pulse 90; temperature 98·5°. Patient complains to-day of pain in his right knee, which is swollen and red, especially at the outer side of the patella, where slight fluctuation can be made out.

20th.—The right knee-joint was aspirated to-day, and about two ounces of thick synovial fluid were withdrawn. The hand is doing well, and in other respects patient is much better.

December 15.—Sensation is slowly returning in the fingers, and the wounds are healing kindly. The knee-joint has been several times aspirated, and to-day a freer opening was made and a horse-hair seton inserted. The temperature keeps about normal, and patient's general condition has considerably improved.

January 17.—The hand now gives very little trouble. Patient can, with his sound hand, flex and extend the fingers of the side operated on without pain. The wound outside the knee does not look healthy, and iodoform is being powdered over it. Temperature normal; patient sleeps and eats well.

26th.—To-day, patient being anæsthetised, Mr. Heath examined the knee-joint, and found the bones and cartilages healthy. The wounds in the hand are gradually healing up, and patient's general health keeps good.

February 2.—The wound on the knee is looking much healthier, and, when the joint is kept at rest with a splint and bandage, patient is allowed to walk about a little.

The hand has now attained its normal size, and sensation is now complete over the fingers and thumb. The fingers can be brought right down to the palm, and extended slightly, but all together, not separately. From this date there was no further trouble with either knee or hand, and patient was sent to Eastbourne as a convalescent on February 7.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL.—His Grace the Duke of Sutherland, K.G., F.R.S., will distribute the prizes to the successful students on Friday, June 25, at 3 p.m.

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Medical Times and Gazette.

SATURDAY, JUNE 19, 1880.

ANIMAL VACCINATION.

We are very glad to be able to state that the Government have obtained leave to bring in a Bill, which they hope to pass this session, to provide facilities by which medical men will be able to obtain from the Vaccine Department a stock of animal as well as of humanised lymph. The subject of animal vaccination was brought before the House of Commons on Friday, the 11th inst., by Dr. Cameron, who proposed that the National Vaccine Institution shall provide a supply of animal vaccine for the use of those who prefer it to the ordinary lymph. He fully admitted and showed the immense advantages that have been obtained from ordinary arm-to-arm vaccination, and stated that, to his mind, the advantages of compulsory vaccination had been proved beyond the possibility of dispute. He alluded to some of the objections made to vaccination only to state that they were altogether unsubstantiated; but he pointed out that though the allegation that, through the agency of vaccination, other diseases had been communicated, was entirely unproven except with respect to one disease—viz., syphilis,—yet, as regards that disease, it had undoubtedly been transmitted by means of vaccination; and so long as vaccination was compulsory it was the duty of the State to provide, if possible, an absolute protection against the possibility of the recurrence of such a disaster. The employment of calf-lymph instead of humanised lymph affords the desired guarantee; and after referring to the very large extent to which calf-lymph has for many years been employed, with excellent results, in France, Belgium, Holland, America, and other countries, Dr. Cameron concluded his able and temperate speech by moving—"That as cowpock-lymph direct from the calf, commonly known as animal vaccine, is of at least equal value as a prophylactic against small-pox with the ordinary humanised lymph, and as its use affords an absolute guarantee against those human diseases occasionally invaccinated with humanised lymph, this House is of opinion that, to meet the objections to vaccination founded on the possible communication of other diseases through that operation, a supply of animal vaccine should be provided by the National Vaccine Establishment for the use of those who prefer it to the ordinary lymph." Mr. P. A. Taylor moved, as an amendment—"That in the present unsettled condition of medical opinion in regard to the safety of using ordinary humanised lymph, as also of the safety, effectiveness, and practicability of the use of animal vaccine, it is, in the opinion of this House, inexpedient and unjust to enforce vaccination, under penalties, upon those who regard it as undesirable or dangerous." Mr. Hopwood seconded the amendment; but it would be useless to repeat here the arguments, so-called, of either of those gentlemen. The statements made are sufficiently well known, and have been refuted over and over again; and we will be content to deny that the opinion of the profession is at all unsettled on the subject, and to remark that all medical men are not by any means medical authorities. Mr. Samuelson observed, very truly, that the House was not a tribunal fitted to judge between the opposite views advanced in reference to the value and efficacy of vaccination, suggested that a Royal Commission might be appointed to inquire into the whole subject, and appealed to the Prime Minister, who had stated that his mind was open on the question, to grant such an inquiry; but the Prime Minister made no response to the appeal. Dr. Farquharson spoke well and ably in support of Dr. Cameron's motion; and Mr. Mitchell-Henry, while supporting compulsory vaccination, made an Irish grievance out of the stingy way in which Government supports the Vaccine Establishment in Ireland.

The President of the Local Government Board, Mr. Dodson, in reply, was of opinion that all that had been stated against vaccination simply showed that bad or careless vaccination might do a good deal of harm, but certainly did not prove that proper vaccination was mischievous. As to the provision of animal lymph, he observed that the Vaccine Department had not been negligent on the question of the use of that lymph. There had been objections to the employment of it, but more recent experience had removed some of those objections; and, that being the case, the Department had no wish to be in any way a bar to a practice which should conduce to the safety and health of the community. He was prepared, therefore, to say, on their behalf, that arrangements should be made by which animal lymph might be supplied as stock, as well as humanised lymph, to medical practitioners as they might desire; but he could not agree to the resolution proposed, nor, of course, to the amendment. As to the question of multiple penalties for disobedience to the Vaccination Act, the Committee of 1871 had recommended they should be abolished, and he was prepared to submit their abolition to the approval of the House. Dr. Cameron's resolution was then withdrawn; the amendment was negatived without a division; and a Government Bill for a supply of animal vaccine by the Vaccine Department, and for the abolition of multiple penalties, is to be introduced as speedily as may be.

We need not say that we regard Mr. Dodson's resolve with regard to a State supply of animal vaccine with great gratification and satisfaction. If carried out well it will give all that in this respect we have so long urged upon Government, and insisted upon as a just and necessary complement of compulsory vaccination; and it will, we are sure, give very general satisfaction. It is, happily, far short of the revolutionary suggestion on the subject made at the Vaccination Conference held by the British Medical Association last year; but it is in accordance with the wise and temperate advice given to the Conference, as to what to ask for,

by Dr. Warlomont, than whom very few have a larger and more practical knowledge of animal vaccination. As to Mr. Dodson's proposal for the abolition of multiple penalties, it does not at present seem possible to look upon it with any satisfaction; for, nakedly stated, it sounds like a proposal to provide facilities by which anyone may compound for continuing to break the law. If, together with providing a choice between the employment of humanised and animal lymph, and abolishing multiple penalties, Mr. Dodson would further provide for the actual vaccination of every child, with or without the consent of the parents or guardians, he would leave little to be desired in our vaccination laws; except a provision for revaccination. But we will withhold further comment on these subjects till Mr. Dodson's Bill is before us.

TAPPING PULMONARY CAVITIES.

We elsewhere publish an abstract of a paper read before the Royal Medical and Chirurgical Society at their last meeting. The paper was by Dr. Douglas Powell and Mr. Lyell, and is of such a nature that we can hardly allow it to pass without some comment. We are very far from saying that the operation in the case described was not the best under the circumstances, but we would most earnestly protest against the notion that this most formidable operation is to be lightly undertaken in any case of pulmonary cavity. The object of this particular operation was to remove some fœtid fluid which was supposed to have accumulated at the lower portion of one lung, and to leave a permanent channel for drainage. This, as it so happened, was effected, but with no great advantage to the patient, for he died not long after. For the success of such an operation it is clear that more than one thing is necessary. The first is, to prove the existence of a cavity—not always easy when it is full of fluid. Next, that this should be more or less distinctly superficial—a condition of things not very common, except where operation would be for the most part needless or superfluous. Next, that the pleura should be distinctly adherent, for the addition to a suppurating cavity of a pyo-pneumothorax is hardly to be desired. But the report of the case by the authors themselves must make men fully aware of the enormous risk of such operations or attempts at operation. Dr. Powell's skill in physical diagnosis is well known to us, and the results obtained by him, say, in localisation of a cavity, are not likely to be attained by all men. But, notwithstanding his skill, more than one shot had to be made before pus was reached, and even then the main cavity was never touched at all. Moreover, the point of the instrument had gone within one-eighth of an inch of the diaphragm, so that half an inch more would have driven it clean through the diaphragm and peritoneum into the liver, with the inevitable result of escape of the putrid fluid, and speedy, if not instantaneous, death. Surely we cannot accept such results of this procedure, conducted by well-skilled men, as being sufficient to introduce it into ordinary practice. To our mind it is intensely hazardous, for, even after the operation was over, there was much trouble with the tube, which slipped in and slipped out in a disagreeable way. There is not the slightest comparison between this operation and that for empyema, as was suggested by Dr. Barlow, except that they both deal with collections of pus. But, if we remember aright, there is a river in Monmouth and a river in Macedon, yet the intimate connexion between the two places could only be discovered by a Fluellen. If there is any room for such an operation, it is in the kind of cases described by Dr. Theodore Williams and Mr. Erichsen. Here the patient had become pestilential to himself and to not only all around him, but to all in the house, and any operation almost would have been justified under the circumstances. Yet even here, where everything was carried out with the care and attention for which Mr. Erichsen is noted a formidable general emphysema developed itself. The doctrine that this operation, if done at all, should be done as soon as possible, is, we hold, a most portentous and a most mischievous one; we view it with dismay. We do not suggest that the operation should be withheld till all hope is gone of anything doing good, for then it would be useless; but the idea of men driving needles in all directions through an inflamed lung in search of pus does not, we must say, commend itself to our feeble and unheroic understanding.

CANCER OF THE BREAST.

The subject of breast-cancer justly claims, and has met with, a considerable amount of attention during the past few months. This, in a large measure, has been due to the importance of the subject; but an interesting paper by Sir James Paget in *St. Bartholomew's Hospital Reports* for the year 1874 has been the more immediate incentive to this work.

Sir James Paget's paper, entitled "Disease of the Mammary Areola preceding Cancer of the Mammary Gland," called attention to "certain chronic affections of the skin of the nipple and areola" as being "very often succeeded by the formation of scirrhous cancer in the mammary gland."

In describing the disease, Sir James says:—"The patients were all women, various in age from forty to sixty or more years, having in common nothing remarkable but their disease. In all of them the disease began as an eruption on the nipple and areola. In the majority it had the appearance of a florid, intensely red, raw surface, very finely granular, as if nearly the whole thickness of the epidermis were removed; like the surface of very acute diffuse eczema, or like that of an acute balanitis. From such a surface, on the whole or greater part of the nipple and areola, there was always copious, clear, yellowish viscid exudation. The sensations were commonly tingling, itching, and burning, but the malady was never attended by disturbance of the general health. I have not seen this form of eruption extend beyond the areola, and only once have seen it pass into a deeper ulceration of the skin after the manner of a rodent ulcer." . . . . "In some of the cases the eruption has presented the characters of an ordinary chronic eczema . . . . in some it has been like psoriasis. . . . . I am not aware that in any of the cases which I have seen the eruption was different from what may be described as long persistent eczema or psoriasis; . . . . and I believe that such cases sometimes occur on the breast, and after many months' duration are cured, or passed by, and are not followed by any other disease. But it has happened that in every case which I have been able to watch, cancer of the mammary gland has followed within at the most two years, and usually within one year."

"The formation of cancer has not in any case taken place first in the diseased part of the skin. It has always been in the substance of the mammary gland, beneath or not far from the diseased skin, and always with a clear interval of apparently healthy tissue."

It is an old-established doctrine that long persistent irritation will give rise to cancer in organs which are primarily subject to this disease; but the cancer so set up has, we believe, always been superficial, and in direct continuity with the tissues so irritated. Sir James Paget is the first authority to draw attention to chronic skin disease as a forerunner of breast cancer, but "with a clear interval of apparently healthy tissue." Other observers, notably Mr. Butlin, Dr. Thin, and Mr. Morris, have since published observations on this highly important subject. The discussions on these papers have called forth, as was to be expected, conflicting opinions; but the main fact seems to be undisputed, that in a certain number of cases

cancer of the breast and chronic disease of the skin over it are associated together. This exact relationship has, it seems to us, yet to be worked out; for it would seem to differ from ichthyosis linguæ and balanitis in their relations to cancer in one very important point—that whereas these latter conditions gradually merge into the cancer and are *ab initio* continuous with it, in the case of the eczema of the nipple there is between it and the cancer of the mammary gland "a clear interval of apparently healthy tissue." It would be obviously unwise to shut our eyes to this association, or argue that it is an event of very rare occurrence. It is, indeed, just under these circumstances that such a cause might be overlooked; while it is, nevertheless, well to be armed at all points when we are dealing with such a dangerous and insidious disease as cancer.

Among recent publications on cancer, a statistical essay by Dr. A. von Winiwarter of Vienna(a) is one of the most important, for it discusses a large number of cases which had been under the care of one and the same surgeon (Professor Billroth), and nearly all of which had been verified as cancers by microscopical examination. The object which this author had in view was twofold: first, to ascertain certain unsettled clinical features of cancer of different parts; and second, by following up a number of cases, to determine what is really obtained by operative interference in this disease. The former object, as bearing on the etiology of cancer, chiefly concerns us, and we shall therefore in the present article confine ourselves to a notice of the chief etiological factors as mentioned by Dr. von Winiwarter. We may just say that of 578 cases, 173 were cancers of the breast (of which three occurred in male subjects), and it is to these that we shall refer.

We learn that the greatest number of cancers appeared between 41-45 years of life, but that the average age of all the cancer patients was 45·3 for the commencement of the disease. This corresponds pretty nearly with the onset of the climacteric period; and as this period varies slightly in individuals and in different races, it follows that the cancerous age also varies within similar limits. This will in a measure serve to reconcile the apparent divergence of medical opinions on this important point, and it may serve also to indicate, in particular cases, that the climacteric period is less a matter of age than of idiosyncrasy. Less than a quarter of the total cases commenced after the child-bearing period was passed. Menstruation did not appear to have any etiological connexion with the carcinosis. The average duration in 14 cases under the age of forty was 31·76 months; in 56 cases over forty years of age, 33·64 months. These figures, however, are too small to allow of a reliable conclusion as to the relative duration of cancer at different ages. Dr. Winiwarter, it may be said, does not believe that the younger the patient the more rapid will be the course of the disease, although the statistics just quoted would seem to suggest such a view, and one which we think would be in harmony with what is generally taught by most English surgeons.

Marriage and child-bearing seem to exercise a very marked effect on the development of cancer. Out of 170 women, the subjects of breast-cancer, 153 were married, and 16 only were spinsters, and one case was unrecorded in this respect. Twenty-two of these women had never borne children, of the remainder 13 had one, 16 had two, 10 had three, 10 had four, 19 had five, 8 had six, and 29 had more than six, children. In 34 cases it was not known whether the women had borne children, and in 9 the number of children was not known. The large number of women with more than six children was remarkable, being 21·3 per cent. of all the known cases, and 25·4 per cent. of the total women who had had children. Of the 136 known cases, 16·2 per cent. had never borne children. The percentage 21·3 just quoted can hardly be accidental, and we can scarcely escape the conviction that the number of births exercises a direct influence on the production of cancer. Scarcely less remarkable is the influence of suckling. Of 102 women with breast-cancer, 36·2 per cent. had never suckled, while 63·8 per cent. had suckled.

From these figures it is obvious that there is a certain proportion of disease which does not appear to be the result of either child-bearing or suckling. On this point Dr. Winiwarter says—"It is easy to imagine that under certain circumstances, which we do not understand, conditions are started in the breast which lead not to the physiological development of the gland, but rather to a pathological proliferation of the glandular structure—tumour formation."

Inflammatory affections of the breast in consequence of, or occurring during, lactation are generally thought to exercise some influence on the production of cancer; but the statistics before us fail to show what this influence is—indeed, they do not prove that there is any direct connexion between the two conditions. Mechanical injuries, which have the reputation of leading, more or less directly, to cancer formation, are also considered; but the evidence in favour of an etiological connexion is altogether wanting. So, too, as regards the irritation which the use of the corset must exercise on the breast. It is of course difficult to trace this connexion, but it seems very improbable that the constant pressure which the corset keeps up in very many cases can be without its effects, if there be any truth in the doctrine of extraneous irritation leading to cancer. The retracted or undeveloped nipple, which is well known to result in many cases from corset-pressure, and the occasional results of this condition—mammary abscess and chronic mastitis—are very troublesome diseases, even if they pass off without setting up any deeper or more serious trouble. As regards heredity, in only 5·8 per cent. was this factor recorded as present.

Dr. Winiwarter has had no experience of Sir James Paget's disease leading to cancer. He says—"I cannot adduce any evidence in this direction from my present material; the anamnesis is, indeed, too little detailed: such like affections are frequently overlooked by the patients."

Such are the etiological factors touched on in this essay. They embrace the most common, and those which are most likely to produce tangible results. It will have to be conceded, we think, that the outcome is largely negative; but even this will prove useful in correcting our present impressions, and will doubtless lead to further observations, which will help to correct them if erroneous.

Another evidence in favour of external irritation is implied rather than expressed. It is this. By far the larger proportion of cases occurred among hospital patients; and these are presumably persons whose surroundings more expose them to external irritations. Coarser clothes, manual labour, greater exposure to injuries, uncleanliness, are all so many possible causes to which they are exposed in a greater degree than those whose lot is cast in a higher social scale.

We cannot pursue the subject further on this occasion, but recommend it to our readers as one on which there is still much to learn and much to teach.

(a) "Beiträge zur Statistik der Carcinome," von Dr. Alexander von Winiwarter. Stuttgart: Ferdinand Euke. Quarto, pp. 308.

THE WEEK.

TOPICS OF THE DAY.

The Public Health Conference, of which notice had been previously given, was held last week at the rooms of the Society of Arts. Several matters of more or less importance

were brought forward for discussion, and various amendments were suggested. In considering Section 299 of the Public Health Act, 1875, which empowers local boards to take proceedings in default of local authority, it was stated that everyone had had large experience of these defaults, and unless compulsion of some sort, either imperial or departmental, were applied, the defaults would continue, and increase. Mr. Owen, of Exeter, drew attention to the difficulty of putting this and similar Acts into operation. Mr. Mellor, Town Clerk of Rochdale, protested against power being placed in the hands of the Local Government Board to take action without consulting local authority. Mr. Chadwick thought that the mere fact of an augmented death-rate would be a sufficient reason for the central authority to take action; but Mr. Mellor warmly protested against the imputation that local boards had not as much interest in the sanitary condition of their localities as any authority resident in London. The President, Mr. James Stansfeld, M.P., remarked that there were cases where the interference of the Local Government Board was highly desirable; for instance, there were cases in which the local authority and the inhabitants seemed to be in a conspiracy to injure themselves. Mr. Nichols, C.E., said as the result of thirty years' experience he found the various Acts were working one against the other, and this, in his opinion, would eventually lead to the introduction of a new Act of Parliament. A resolution was afterwards passed, embodying the suggestions of the members respecting the amendment of the Acts.

On the occasion of his recent election for the University of London, Sir John Lubbock in his address referred to the interest he had taken in medical legislation, and to his success in getting Bills passed for the English College of Surgeons, for the Apothecaries' Company, and for the Dental Reform Association. Dwelling more particularly upon the Dental Act, Sir John vindicated the respect shown towards the vested interests of those previously practising dentistry, although unqualified by any diploma. The clause enacting this was drawn on the lines of the Medical Act, 1858, and Parliament would never consent to deprive persons actually practising of their rights. "The Bill was brought to me," Sir John said, "by Mr. Tomes, President of the Dental Reform Association, was supported almost unanimously by the dental profession, and had been submitted to and approved by the three great surgical colleges. It is true that, as you have been told, some eminent medical men expressed themselves as opposed to the Bill, but I think you will be surprised to hear that several of them afterwards withdrew their opposition and, having looked further into the matter, expressed their full approval of the Bill, and hoped it would become law. Under these circumstances, I think you will agree with me that, having thus the sanction of the recognised medical authorities, I was justified in considering that I acted in accordance with the wishes of the medical profession. I know there are still some few who object to the Bill, but even doctors will, we know, differ, and, as I believe their objections are founded on misapprehension, I hope that eventually they will themselves admit that it has worked well."

We congratulate the authorities in New York upon their efforts to put down a nefarious and harmful practice. A person calling himself Dr. John Buchanan was recently charged there with selling bogus medical diplomas. His papers showed a sale of three thousand spurious diplomas, and, notwithstanding this enormous number, he had still a large quantity on hand. This man's trade was principally with Germany, but some of his fabrications were sent to this country; the traffic was, of course, lucrative, the prices charged varying from $65 to $110 for each diploma. Nearly all the diplomas issued were antedated.

The consumption of spirits in this country continues to decline, but whether this satisfactory condition of things is to be attributed to an increase of common sense in the population, or to the hardness of the times, or to other causes, we leave to others to decide. The fact, however, is incontrovertible. In the first quarter of the present year, the quantity of home-made spirits on which duty was paid for consumption in the United Kingdom, as beverage only, was 6,594,988 gallons, showing, when compared with the corresponding period of last year, a decrease of 188,991 gallons in England, 201,075 gallons in Scotland, and 259,633 gallons in Ireland. The total decrease, therefore, for the United Kingdom is 649,699 gallons, and the decrease in comparison with the first quarter of 1878 is no less than 1,073,619 gallons. The foreign spirits imported and entered for home consumption also show a large decline, being, for the first quarter of 1880, 506,612 gallons less than in the corresponding quarter of last year, and 649,100 gallons less than in that of 1878. These figures should afford some consolation to those who have been a little alarmed at the anti-teetotal tendencies of the Budget propounded by the present Government.

In the High Court of Chancery, before Vice-Chancellor Sir J. Bacon, Messrs. Firth and Blackburn, of Spen, in Gomersal, Yorkshire, last week applied for an injunction to restrain Mr. John Gill, flannel manufacturer, of Cleckheaton, from polluting a watercourse known as the Spen Beck. The plaintiffs are starch manufacturers, and their mills are worked by water derived from the beck, but since 1878, when the defendant began to pull and wash blankets and flannels in the stream, and discharge the waste water from his works into the beck, the water has become unfit for the manufacture of starch, and the plaintiffs have entirely ceased to make any since March last. The defendant admitted that he did discharge a great deal of refuse water into the beck, but he alleged that the water in it was already so fouled and polluted by other mills, and by the sewage of Cleckheaton, before it reached his mill, that no appreciable injury was caused to the plaintiffs by his works. It was also in evidence that the defendant had recently commenced the erection of filtering-beds and tanks, which were almost completed, and which, it was hoped, would quite remove all cause of complaint. The Vice-Chancellor considered that the plaintiffs' case was admitted by the defendant, who did not attempt to deny that his mill did pollute the water of the beck, and the fact of his constructing filtering works was a plain confession of his liability to prevent this pollution. He therefore felt no difficulty in acceding to the motion, and granted an injunction until the hearing, restraining the defendant from discharging any noxious or foul matter into the Spen Beck from his mill.

At the Bow-street Police-court, on Saturday last, a man named Henry Forrester was charged with a savage and unprovoked assault upon Mr. John F. Silk, House-Surgeon at King's College Hospital. The complainant was prescribing for the out-patients, when Forrester came behind him and struck him a violent blow on the head with a piece of iron resembling a poker. Mr. Silk was felled to the ground, and the prisoner was at once seized and detained. The prisoner had complained previously about his medicine, which was examined and found all right; he appeared to be labouring under the delusion that his medicine had been poisoned. Dr. Carpenter, Surgeon at Clerkenwell Prison, deposed that he believed the prisoner to be suffering from various delusions. Forrester was, however, committed for trial.

At the last week's meeting of the Metropolitan Board of Works, amongst other business transacted, a letter was read from the Home Secretary, transmitting instruments under his hand approving of the regulations made to enable the

Board to remedy certain evils, by way of removing, without delay, houses in a dangerously unhealthy condition, which are situated in the following areas, under the Artisans' Dwellings Acts, viz.:—High-street, Islington; Peartree-court, Clerkenwell; St. George-the-Martyr, Southwark; Roman's-buildings, Marylebone; Little Coram-street and Great Peter-street, Westminster. A memorial was also read from the Strand District Board, praying the Board to do their utmost to obtain a supply of water in a manner which they might think best for the interests of the ratepayers in general.

The report that the Local Government Board had re-rejected the scheme of the Lower Thames Valley Main Sewage Board appears to have been incorrect, or at the least premature. In answer to a question put on the subject by Mr. Cubitt, on the 15th inst., the President of the Local Government Board stated that no decision had yet been arrived at, as the report had been referred back to the inspector for further information. Mr. Dodson promised that the report should receive his attention as soon as possible, but observed that the question demanded the most careful consideration, as it is one of unusual importance, and involves interests of great magnitude.

At a meeting of the Distribution Committee of the Hospital Saturday collections at Birmingham, held last week, it was announced that the receipts on account of the present year's collection amounted to the sum of £3745 3s. 1d., and it was decided that the sum of £3500 should be divided among the medical charities of the town, on the same principle as that adopted in previous distributions—viz., in proportion to the ordinary current expenditure in the last published report of each institution.

At Middleton, last week, Mr. Molesworth, the district coroner, conducted an inquiry into the death of a child two months old, which had died after a dose of laudanum administered by its mother because it was "very cross"; and he remarked that these cases betrayed such an amount of criminal carelessness that he thought it right to submit the facts in the present instance to the Public Prosecutor. The inquest was accordingly adjourned.

It is stated that the governors of the South Devon Hospital, Plymouth, have decided to erect a new building in the town at a cost of £150,000.

THE CRISIS AT GUY'S HOSPITAL.

The following authoritative report of the latest incident in the crisis brought about by the proceedings of the Treasurer of Guy's Hospital has been published in the form of a letter to the editors of the daily papers, and is dated "Guy's Hospital, June 16":—"This morning there was a demonstration on the part of the students of Guy's Hospital against the Treasurer. The students, to the number of 200, assembled in the colonnade of the Hospital and hissed the Treasurer on his way to the 'take-in' room. This will, perhaps, be represented to you as a riot which had no justification. There was no riot. There was abundant justification. The students stood in perfect order in two lines, leaving ample room for the Treasurer, and as soon as he had passed, three cheers were given for the medical and surgical staff. The students then retired without the least disorder to the lecture theatre, when a meeting was held and the following resolutions passed:—1. 'That in consequence of the action of the Treasurer during the disturbing events of the past eight months, the students of this Hospital regret that they can no longer accord to him that respect which has been hitherto due to his office.' 2. 'That the steps taken this morning were made after due and calm deliberation, with a view of publicly expressing this opinion.' 3. 'That a copy of the resolutions be immediately transmitted to the Treasurer.' Knowing how the actions of medical students are usually misrepresented, we desire to point out strongly that the demonstration was carried out with the utmost moderation and decorum. We may add we were merely spectators.—A. Ernest Maylard, M.B., B.S. London, Senior House-Surgeon; G. H. Russell, M.B. London, Senior House-Physician." It is not possible for us now to comment on this occurrence and its significance; but we shall very shortly again comment on the state of matters at the honoured old Hospital founded by Guy.

EPIDEMIOLOGICAL SOCIETY.

On the evening of Tuesday, the 15th inst., there was held a special meeting of the Epidemiological Society to discuss the papers that have lately been read before the Society on the prevalence and nature of the various forms of continued fever found in tropical climates. The discussion was an important one, and next week we hope to be able to publish a full account of the meeting, and to call attention to the chief questions raised and discussed.

LONDON HOSPITAL SUNDAY COLLECTIONS.

Up to the evening of the 16th inst. the results of the hospital collections on Sunday last show a sum of about £12,000 already received. Upon the present occasion the weather was all that could be desired, and it remains to be seen whether the Fund will equal or exceed the total realised upon former anniversaries. Among the different sums collected were the following:—St. Paul's Cathedral, £171 0s. 10d., against £112 12s. 4d. last year; Westminster Abbey, £269 13s. 2d., against £255 last year; Mr. Spurgeon's Tabernacle, £257, or £71 in excess of last year; St. Michael's, Chester-square, £550 12s. 3d.; St. Mark's, North Audley-street, £249; St. Ann's, Soho, £138 16s.; St. John's, Paddington, £121 13s.; the executors of the late James Drew, £105; St. John the Evangelist, Wilton-road, £104 14s. 7d.; Regent-square Presbyterian Church, £105; St. Peter-le-Poor, Old Broad-street, £114 18s. 8d.; Holy Trinity, Knightsbridge, £90 13s. 6d.; Grafton-square Congregational Church, £85 16s. 6d.; St. John the Evangelist, Penge, £75; Lewisham Congregational Church, £77; Chapel Royal, Whitehall, £60 15s. 5d.; Mercers' Chapel (including £52 10s. from the Mercers' Company), £55 15s.; St. George's, Bloomsbury, £59 11s. 10d.; St. John's, Forest-hill, £64; St. Augustine's, South Kensington, £80 12s. 10d.; St. Anne's, Highgate-rise, £34 2s.; St. Thomas, Camden Town, £22 13s. 10d.; Christ Church, New Malden, £47 16s. 4d.; St. Paul's, Manor-road, Forest-hill, £30 3s. 2d.; All Saints', Upper Norwood, £42 4s. 10d.; Christ Church, Chislehurst, £35 8s. 11d.; St. James's, Camberwell, £40 4s.; St. Michael's, Stockwell, £41 2s. 11d.; St. Andrew's, Holborn, £47 15s. 10d.; J. V., £50; St. Mary's, Lewisham, £31 8s. 3d.; Brunswick Chapel, Upper Berkeley-street, £53 15s. 4d.; St. Mary New Church, Stoke Newington, £53 10s. 10d.; Holy Trinity, Kilburn, £58 10s. 6d.; Christ Church, St. Marylebone, £42 9s. 4d.; Epsom Parish Church, £35 1s. 9d.; All Hallows the Great and Less, £56 10s. 7d.; and the box outside the Mansion House, £19 1s. 4d.

THE RESPONSIBILITY OF OPERATING SURGEONS.

A curious case, which formed the subject of a coroner's inquest and of a charge in the police-court, occurred in Dublin last week. It appears that a married woman, aged twenty-two years, was severely burned about the chest and arms while in an epileptic fit, on the evening of May 28. She was admitted to Mercer's Hospital, Dublin, and placed under the care of Mr. F. Alcock Nixon, one of the surgeons to that institution. Owing to the supervention of secondary

hæmorrhage, it was deemed advisable, on June 3, to amputate the woman's arm. She gave a qualified consent to the performance of the operation, but her husband put a veto on it, "the alleged motive being," in the words of the police-charge, "that if deceased lived she would be a burthen to the prisoner" (*i.e.*, her husband). The arm consequently was not amputated; tetanus set in on June 6, and the woman died on the evening of the following day. The jury at the coroner's inquest appended to their verdict of accidental death this rider—"We are of opinion that had an operation been performed after the consultation on the 3rd inst., her life would have been saved, and that there is no evidence that her husband interfered, and we exonerate him from any blame. At the same time we consider it was a proper case for an investigation." The Coroner expressed his concurrence in the verdict. In the police-court, the accused husband was remanded pending the inquest, his own bail being taken for his appearance.

OVARIOTOMY.

Our readers will feel much interest in learning that last week Mr. Spencer Wells completed his thousandth ovariotomy, and will be gratified to know that the patient is going on well. The results of Mr. Wells' operations, completed or uncompleted, successful or not, have from time to time been, with exemplary loyalty and faithfulness, placed before the profession; and the grand statistical outcome of all the thousand ovariotomies he has now performed will, in due course, be brought before the Medical and Chirurgical Society. The record will constitute a singularly great and lasting proof—*monumentum ære perennius*—of Mr. Wells' distinguished and peculiar position among the great surgeons of the nineteenth century. It must have rarely happened, we imagine, that a surgeon has performed any one great operation a thousand times; and certainly, when we remember the opinions held some twenty-five or thirty years ago, by the most eminent surgeons of the day, regarding ovariotomy, the fact that one surgeon has now performed that operation on a thousand patients is one of the most remarkable and striking events in the history of surgeons. The continually increasing success that has attended Mr. Wells' performance of ovariotomy is pretty well known, but the full record of his cases will be expected with great interest.

SANITARY LEGISLATION.

On Monday this week the President of the Local Government Board received a deputation, consisting of Mr. G. W. Hastings, M.P., Captain Douglas Galton, C.B., Dr. Alfred Carpenter, and others, from the Council of the Social Science Association. The object of the deputation was to urge the importance of certain amendments in the sanitary laws, and they presented the following resolutions:—1. "That, in order to lessen the evils resulting to health from the growth of suburban districts outside the boundaries of towns having urban powers, authority be obtained to bring both the districts within the boundaries of the town, and the suburban districts in every case, whatever be the nature of the local authorities, within the control of one sanitary authority having urban powers; the central authority to have power to act for this purpose by provisional order, no application from any local authority being required." 2. "That the Council, while unprepared to recommend at the present time an entire conformity of rural to urban powers, is, nevertheless, firmly of opinion that the distinction between them is maintained with serious disadvantage to the community in regard to the control of new buildings; and it would represent to Government the importance of giving to urban and rural authorities power to make building by-laws relating to the same subjects, the by-laws themselves to be adapted in each case to the wants and circumstances of the locality." 3. "That, in any further amendment of the law, provision be made for the better securing the healthy condition of houses before they are occupied, by enacting that no new building be occupied as a dwelling-house until the drainage and water-supply thereof have been made and completed, and until a certificate have been given by a duly qualified person appointed by the local authority for those purposes that the same is fit for human habitation." 4. "That, in any future amendment of the law, provision be made for the compulsory registration of infectious diseases; the case to be reported to the local authority by the householder upon information given to him by the medical attendant." Mr. Dodson characterised the resolutions as of high value and importance, and will, no doubt, give them due consideration.

PROFESSOR RIZZOLI.

The *Gazette Hebdomadaire* furnishes the following appreciation of Prof. Rizzoli:—"Professor Rizzoli, whose illness we announced recently, at the same time as his generous liberality to the poor of Bologna, has just died in that city. He was a surgeon of the highest merit, in whom it was pleasant to recognise exactness of diagnosis and prognosis combined with logical investigation of the nature of diseases. He recommended and practised the association of internal therapeutics with surgical therapeutics, and in his operations gave preference to the fingers over instruments, although he had invented or modified a great number of these—his object being above all things to render operative procedures less complex and more efficacious. Boldness and prudence were admirably conjoined in him, constituting him, according to circumstances, an audacious operator or a determined conservative. In his school a whole generation of surgeons has been formed, who maintain surgery in Italy in the foremost rank." He has not published any didactic work on surgery; but memoirs, papers, etc. (some of which have been collected in two volumes), have been issuing from his pen during the whole of his prolonged life.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

At the ordinary meeting of the Council of the Royal College of Surgeons, held on Thursday, the 10th inst., when the minutes of the last ordinary meeting (that of May 13) had been read, Mr. Gay, supported by Mr. Busk, moved that so much of the minutes as related to Mr. Marshall's proposition to institute an examination in elementary anatomy and physiology, to be passed by candidates for the membership or fellowship at, or after, the end of the first year of study, be not confirmed. Mr. Marshall having, however, explained, we understand, that he sought only to institute a compulsory examination at the *schools* of medicine, in, perhaps, the presence of an assessor from the College, Mr. Gay and Mr. Busk withdrew their motion. The matter is, therefore, according to the resolution of the former meeting, by which the principle of Mr. Marshall's motion was adopted, referred to the "Committee on Examinations in Anatomy and Physiology" to prepare and submit to the Council, for approval, the necessary regulations for defining and conducting the proposed examination. From the report of the Committee we may hope to learn the real meaning of Mr. Marshall's proposal. Sir James Paget moved the non-confirmation of that part of the minutes relating to the withdrawal of the College from the Conjoint Scheme for England. After some discussion the motion was agreed to; and then Sir James Paget moved, and Mr. Curling seconded, a resolution to the effect that, in view of the

uncertainty respecting the establishment of conjoint schemes in each division of the kingdom, the Council shall give notice to the several medical authorities concerned in the English Conjoint Scheme, of the intention of the College to make, alone, or in conjunction with other bodies, arrangements for a complete examination in Medicine, Surgery, and Midwifery, to be passed by all candidates for the diplomas of Member and Fellow of the College. This was agreed to, and will be carried into effect without requiring confirmation. Mr. Jonathan Hutchinson was then nominated for the office of Professor of Pathology and Surgery; Messrs. W. H. Flower and W. K. Parker for the offices of Professors of Comparative Anatomy and Physiology; and Mr. Gerald Francis Yeo for the office of Lecturer on Anatomy and Physiology, Mr. B. T. Lowne having signified that he did not desire to be re-elected. The election to these offices will take place on July 1, and other Fellows or Members of the College may be nominated as candidates for the office of Professor or Lecturer on or before the 28th inst.

THE VICEREGAL COURT IN IRELAND.

An incident, probably without a parallel in the history of the Irish Viceroyalty, has just occurred. Shortly after his arrival in Ireland, his Excellency Earl Cowper became slightly indisposed, and an eminent Dublin surgeon—*not* one of his Excellency's household—was called in to attend him. In consequence of this slight to the physicians and surgeons of the household, Dr. Robert McDonnell, F.R.S., has placed in Earl Cowper's hands his resignation of the appointment which he holds as Surgeon-in-Ordinary. This unpleasant incident is not without significance, particularly at the present time, when attention is being drawn to the absurdity of making the Lord-Lieutenancy of Ireland a party office. So long as her Majesty's Viceroy in Ireland is identified with a political party, we suppose it will be necessary that the Viceregal household shall be composed of political supporters and partisans, and consequently there will be a risk that the ablest men in the profession of medicine may be passed over in favour of men less able, but of stronger political views. In these remarks we do not for a moment question the highly distinguished position which Dr. McDonnell and some of his late colleagues in the Viceregal household occupy in the profession, and we believe that few will deny that Dr. McDonnell took the only course which was open to him under the rather awkward circumstances in which he found himself placed.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL.

The annual report of Queen Charlotte's Lying-in Hospital, Marylebone-road, for the year 1879, which has recently been made public, sets out by explaining the steps taken to ascertain the cause of the increased mortality in the institution which eventually led to its being temporarily closed, together with the means adopted by the Committee of Management for improving its sanitary condition in the future. The total expenses of maintenance and management for the past year amounted to £2914, as against £2750 in 1878: this increase is owing to the heavy expenses entailed in every department of the administration, consequent on the late outbreak of fever, and in generally re-stocking the Hospital with linen, etc. The alterations and repairs to the buildings absorbed £913; compensation paid to the in-patients during the closing of the Hospital £198, and compensation to the late Matron in lieu of notice £170. Only £1000 out of the £2000 of invested funds voted at the last annual meeting have been sold out, although the financial year has been exceptionally unfavourable, the excess of expenditure over income amounting for the year to no less a sum than £1656. Under these circumstances it will be readily understood that the report appeals to all those interested in the charity to use their best endeavours to obtain for it increased support. We shall take another opportunity of noticing the medical report on the Hospital for the past year, which is included in the statement of the Committee of Management.

WOOL-SORTERS' DISEASE IN THE BRADFORD DISTRICT.

A lengthened inquiry into the death of a man at Bradford, who was reported to have succumbed to "wool-sorters' disease," was recently held by the borough coroner in the Town Hall, Bradford, and several medical men took part in the proceedings, amongst whom was Mr. Spear, the medical inspector of the Local Government Board, who is at the present time, in conjunction, we believe, with Professor Greenfield, conducting an investigation into the causes and nature of wool-sorters' disease prevalent in that district. The inquiry has been more than once adjourned for the purpose of obtaining fresh evidence; but the jury eventually delivered their verdict on the 9th inst. The evidence, which was very voluminous, was principally of a technical nature, explaining in detail the nature of the employment of the deceased man, and the risks which are run by the hands employed in wool-sorting. Dr. Bell, who attended the deceased, was examined at length, both as to the cause of the disease and the possible steps to be taken for its prevention. He was of opinion that the cause of death in this instance was blood-poisoning, resulting from the man's occupation, and that, as a means of preventing the disease, great care should be taken, in the opening of the bags of hair, that the sorter does not inhale any dust arising from the fleeces. The recommendation which has been made, and which is in practical use in some works—that is, to steep the bale in water before it is opened,—fairly meets the case; and this process will apply to all mohair, goats' hair, alpaca, and camels' hair, and all such dry, dusty, Eastern wools. Damaged materials may produce one sort of wool-sorters' disease, but he was strongly of opinion that another form of disease resulted from the sorting of material which appeared to be quite good, and was not suspected of being injurious, and that this latter was even the more fatal of the two. The jury eventually returned a verdict that the deceased man died of blood-poisoning, accidentally resulting from his employment as a wool-sorter, while engaged in sorting Cape mohair; and they appended to their verdict certain recommendations for regulating such work in the future, adding, that if no legal authority exists for enforcing proper regulations connected with the sorting of wool or hair, statutory powers ought to be obtained for the purpose, with the object of placing this branch of work under the control and inspection of the factory inspectors. They further requested that a copy of their recommendations might be forwarded to the Local Government Board. As this subject is undoubtedly one of much importance, we may expect that the result of their inspector's inquiries will shortly be made public by the Local Government Board.

MEDICAL PARLIAMENTARY AFFAIRS.

Births and Deaths and Registration (Ireland) Bill.—In the House of Commons, on Wednesday, June 9, Mr. Meldon moved the second reading of this Bill, by which it was proposed to assimilate the registration law of Ireland to that of England. Dr. Lyons thought the passing of a partial measure might shut the door to a more complete settlement of the question. If it was everybody's business to give notice of a death it would prove to be nobody's business. He desired to see some mode of verification of death by means of responsible and scientifically educated men. The relatives

should be held responsible to report a death to a medical officer a few hours after its occurrence, and he should see the body and certify if there was any suspicion of foul play. On the Continent the body must not be disturbed before the arrival of the verificator. He proposed that the Bill be referred to a Select Committee in order that full inquiries might be made on the subject. The Attorney-General for Ireland supported the reference; and the Bill was read a second time and referred to a Select Committee.

Animal Vaccination.—On Friday, June 11, Dr. Cameron moved a resolution in favour of a supply of animal lymph by the National Vaccine Institution. He proposed no interference with the law, but simply an improvement on it. He would not interfere with the present method of compulsion, which is productive of much good. He entered into a long argument to show conclusively the need for some rigid system of universal compulsion. The deaths were not the greater part of the evil. One-half the blind persons in asylums for the blind were so in consequence of small-pox. He acknowledged that cases were extremely rare where syphilitic disease was inoculated with the vaccine virus. From the testimony of 500 medical men it had been shown that in only one or two instances had such cases been observed. In view of this possibility, he thought the Local Government Board was bound to supply to those who liked it lymph which could not possibly be tainted with syphilis. He merely proposed the establishment of an experimental station, in London or elsewhere, to work concurrently with the present system for vaccination direct from the calf. The British Medical Association had gone farther, and recommended that the Government should collect and supply animal lymph and nothing else. At Brussels 10,000 people were vaccinated with animal lymph from 1865 to 1870, and they all passed through the epidemic of small-pox without a single death, or one being reported as attacked by the disease. Persons desiring to use the calf-lymph are obliged to write to Brussels for it. Instead of punishing parents for refusing to allow their children to be vaccinated, they should be persuaded to allow them to be vaccinated from the calf. In no single instance had any serious disease been communicated to the infant by the use of calf-lymph. In this country only one in fifty of the population are revaccinated, whereas in Holland two-fifths, and in Brussels one-half, of the population are revaccinated. Mr. P. A. Taylor moved an amendment condemnatory of both systems of vaccination. Dr. Farquharson thought that any improvement which could be suggested to make vaccination more efficient must be a distinct gain to humanity. Very few of the sufferers from small-pox had been efficiently vaccinated. In no case had a nurse at the small-pox hospitals taken the disease in the discharge of her duties when she had been efficiently revaccinated. Those medical men who oppose vaccination do not carry any weight with the profession. Mr. Dodson remarked that during the debate vaccination had been attacked from different sides, and the opponents might almost be left to demolish each other. The law was the same for the rich as for the poor. Three-quarters of a million vaccinations occur annually, and it would be impossible for the National Vaccine Establishment to supply an unlimited amount for all comers. He believed more recent experience had removed, to a great extent, some of the objections to animal vaccination. The Department did not wish in any way to be a bar to experiments as to a practice which might conduce to the safety and health of the community. Arrangements would therefore be made by which animal lymph could be supplied as well as humanised lymph to medical practitioners as they might desire it. He must remark, however, that the greatest care was exercised in the supply of human lymph, and it was in all cases microscopically examined, to make sure that no blood was mixed with it. He also proposed to submit to the approval of the House the abolition of multiple penalties. The proposition and the amendment were then withdrawn.

The Drainage of London.—On Monday, June 14, Sir William Harcourt, in reply to Sir George Campbell, said that no information had reached the Home Office representing that the provisions of the Metropolitan Local Management Act had been neglected in respect of drainage. The drains of all houses, except those connected with the main sewers, were under the control of the vestries. It would be his duty to consider the desirability of further legislation, if there were evidence of non-observance of the Act.

ALFRED SWAINE TAYLOR, M.D., F.R.S.

(*Concluded from page* 642.)

It is, however, as a toxicologist that Dr. Taylor will go down to posterity, not only for his researches in toxicology, but for the famous cases in which he was engaged. One of the first of these was that of Tawell, a Quaker, who kept a mistress at Slough, and, as often happens in such cases, wanted to get rid of her. He paid her a visit, and partook with her apparently of some porter, and then left. She was found insensible and dying immediately after. Nothing was found post-mortem to account for death. The stomach was examined; it presented no morbid change, and contained nothing apparently but undigested food, including the pulp of some apples. There was no odour, when the body was exhumed, about the mouth or in the contents of the stomach beyond a strong smell of stale beer; yet from these contents Dr. Taylor extracted a grain of anhydrous prussic acid—quite enough to kill anyone. The only inference from this was that death might be brought about by prussic acid without leaving any marked smell behind, and that the odour of stale beer is stronger than that of prussic acid. A curious defence was set up by the present Lord Chief Baron, who defended Tawell, namely, that the prussic acid detected came from apple-pips; but the quantity thus evolved could have been at most infinitesimal, and it would take a ton of them, unbruised, to produce a grain of anhydrous prussic acid. The moral evidence was too strong, and the Judge (Lord Wensleydale) too shrewd for such trifling. Some wiseacres, to account for the absence of smell, suggested (in accordance, it was said, with a confession) that the poison had been introduced per vaginam. Had this been the case, it would have been difficult to account for the quantity found in the stomach. Tawell left the woman to die, and made his way to the railway-station, proceeding at once to London; but to his dismay he was met by the police at Paddington and arrested on the charge of murder. For the first time the telegraph had been called into play to aid in the detection of the criminal. Tawell confessed his guilt before he was executed.

But of all the cases in which Dr. Taylor was ever engaged, and perhaps the most famous on record next to that of the Marchioness de Brinvilliers, was the case of Palmer, the Rugeley poisoner. So strong was the influence of this case on Taylor's mind that it gave him a kind of mental twist, and he could never after recur to the subject without pain and irritation. The circumstances, now almost forgotten, were briefly these. William Palmer was a general practitioner in Rugeley, not very far from Stafford, fond of betting and horse-racing. What with losses on the turf and want of attention to his practice, he got involved in pecuniary difficulties, out of which he saw no ready and honest way of extricating himself. He accordingly insured his wife's life for £13,000. He had proposed to various offices for £33,000, but only the first mentioned sum was secured. Within a few months after, his wife died of what was described as bilious cholera, and the money was paid. Next he insured his brother's life for £13,000, having proposed for £82,000, which proposal was rejected. He had this policy transferred to himself, and gave orders to the person with whom his brother resided to constantly ply him with brandy. This, however, did not act quickly enough, and it is strongly suspected that his brother died from prussic acid. He applied for the money, but was refused, and he did not dare to push the matter. He also endeavoured to insure the life of his groom, describing him as an independent gentleman, for £25,000, but failed. Nor were these the only attempts he made to get people to insure their lives on his behalf.

All this might have passed without attracting any very marked attention, had it not been for the case of J. Parsons Cook, for poisoning whom Palmer was subsequently condemned and executed. The history of the connexion between Palmer and Cook need not be discussed here; suffice it to say that it was very much to the interest of Palmer to get rid of Cook. On November 14, 1855, Palmer and Cook were both at Shrewsbury, and there Cook was first taken ill, after drinking a glass of brandy-and-water, which he described as being exceedingly nasty and burning his throat. He immediately vomited freely. Next, he went with Palmer to Rugeley, where he put up at the hotel, and was attended by Palmer, who prescribed for him and gave him various medicines. But the vomiting continued, being generally worse after taking these medicines, till his death. On the morning of the 20th a medical friend saw him, and remained with him. He was pretty well when seen, but had suffered from a spasmodic attack the night before. About eleven o'clock on the night of the 20th his friend persuaded Cook to take two pills left by Palmer. He vomited a little, but soon fell asleep. He awoke in great agitation, with rigidity of the muscles of the neck. Mr. Jones persuaded him to take two more of Palmer's "soothing pills." Scarcely were they swallowed, when he was seized with violent tetanic convulsions, the body was arched backwards, resting on the head and heels, every muscle being intensely rigid. He died in a few minutes.

The post-mortem was made on the 26th, and seems certainly to have been conducted in anything but a thorough manner, for the spine was not examined until the body was exhumed many days after. Nothing was found to account for death. The stomach and intestines were removed, but, in putting the contents of the stomach aside, Palmer, who by some extraordinary arrangement was present, contrived, by knocking against the bearer, to spill the greater part of them, and they only amounted in all to three ounces. The remainder, with the intestines, were placed in a jar, covered with parchment, and sealed; this was removed to the outside of the room whilst the post-mortem was being conducted, and when next seen the covering had evidently been tampered with. Strange to say, no fresh examination was made of the contents to see if anything had been disturbed; the vessel was simply re-covered and re-sealed. When received by Dr. Taylor at Guy's Hospital it was found that the stomach had been cut open from one end to the other, and itself, together with what remained of its contents, mixed up with the intestines and their contents. When examined by Dr. Taylor and Dr. Owen Rees, who was associated with him, no trace of strychnine could be found in these or in any other part of the body, but antimony was found. The conclusion come to was that Palmer had attempted to kill Cook slowly by antimony, but getting tired of the process, and the patient getting restive, the job was finished by strychnine.

Dr. Taylor was most severely cross-examined on the alleged ground that no strychnine was found and that no symptoms appeared for fifty-five minutes; and it must be remarked that a surgeon was with Cook all the time. But it was pointed out that the condition of things was hardly favourable to the discovery of anything in the stomach or intestines, that the presumed poison was given in pills, which would take some time to dissolve, and that meanwhile the patient was asleep—a condition which does not favour the rapid action of drugs and poisons. It was also alleged that strychnia might have had time to disappear in the body, as it is well known that morphia does. Probably this was the weakest part of the argument, for strychnia is probably that of all the alkaloids which may longest be detected after death. The late Mr. Nunneley, of Leeds, the late Mr. Herapath, of Bristol, and Mr. Rogers and Dr. Letheby, of the London Hospital, appeared for the defence, which was most ably conducted (chiefly by Mr. Sergeant Shee), and did some pretty hard swearing—honestly, however, no doubt. Chiefly they urged that if strychnine were present it could always and at any time be easily discovered. So strong was this counter-evidence, that, had it not been for the weighty opinions of Sir Robert Christison, and still more of the late Sir Benjamin Brodie, who at that time occupied a unique position in our profession, Palmer would have had a good chance of escape. But it could only have been a nominal escape, for by this time his wife's body had been disinterred, and large quantities of antimony found in it. Dr. Taylor published a full report of the case in the *Guy's Hospital Reports*, and afterwards published it as a pamphlet. Wherever he makes reference to it in his writings it is with the bitterness of an ill-used man.

Another case in which Dr. Taylor was engaged was that of Smethurst. From some curious reason, Dr. Taylor has eliminated all notice of it from the later editions of his works, and we have had to go back to an edition published twenty years ago to find any reference to it. Smethurst was a medical man, practising at Richmond, and had what seemed to be good reason for getting rid of a Miss Banks, with whom he had been over-intimate. Drs. Julius and Bird referred her illness and death to the use of antimony, which was found in the body after death by Dr. Taylor and Dr. Odling. This view of the case was supported by the late Dr. Todd; but Dr. Tyler Smith, Dr. Richardson, and others, who had never seen the patient, contended otherwise. Smethurst was found guilty, but an outcry similar to that in the Penge case was got up, the prisoner was discharged. This was probably in no small measure due to the fact that Dr. Odling was honest enough to make public the fact that the copper used in Reinsch's process for separating the metal was itself not perfectly pure. Dr. Taylor was also engaged in a somewhat similar case, tried at Liverpool, where a person named Winslow was accused of having poisoned a whole family by the gradual exhibition of antimony. No exact proof of administration could be brought, and the accused escaped.

We can only refer to one more case, in which, by common consent, Taylor was seen at about his worst. The case was that of Catherine Wilson, who was tried at the Central Criminal Court for the murder of a woman six years before. She was found guilty and hanged. The history of the case was somewhat remarkable. Catherine Wilson was first of all tried at the Old Bailey for an attempt to murder the wife of a man with whom she was at the time cohabiting. She gave her in a wineglass what was supposed to be castor oil, but what was, in all probability, strong sulphuric acid. The woman desired some water to be added to the supposed castor oil, when the glass became so hot that she could scarcely hold it, and when she put it to her lips the liquid burnt her. The contents of the glass were thrown away, nothing definite was found afterwards, and Catherine Wilson for that time escaped. But inquiries were made, and it was found that people with whom she had been living had an odd knack of dying with certain peculiar symptoms. Four bodies, including that of Mrs. Soames, were disinterred, but no poison was found. The woman was found guilty, chiefly on the evidence of Dr. Taylor, who swore that in all probability these various people died from the effects of a vegetable poison given in divided doses, and that the poison was most likely colchicum. But not one iota of this was satisfactorily proved; the moral evidence was strong, but the medical evidence was almost *nil*. Nevertheless, as above said, Catherine Wilson was convicted, and hanged, a victim to a bad character. We should be very far from being willing to say that the woman was innocent, but certainly

the evidence was not of that convincing kind which is commonly demanded where the penalty is death.

It would be impossible to conclude this notice of Dr. Taylor without some reference to his books on Toxicology and Medical Jurisprudence. These have been immensely popular, and deservedly so—perhaps even more with lawyers than with medical men. The exactness of their references specially commends them to the legal mind, and his plan of giving all these in the text, and without foot-notes, is also of great use to lawyers—who, above all things, need prompt assistance,—though it renders the reading of the books for medical purposes more tedious and troublesome. In connexion with toxicology, Dr. Taylor was the first to introduce representations of the various accessible poisonous plants and their seeds, taken by a process which might almost be described as nature-printing, or nature-photography; and it is to this that they owe their great accuracy.

It is not perhaps generally known how much both chemists and practitioners are indebted to Dr. Taylor from a pecuniary point of view. Formerly, when an examination was ordered, say by the coroner, the fee which by law he was allowed to give was something altogether inadequate to the care and labour which a lengthened chemical investigation demands. Under such circumstances Dr. Taylor was accustomed to apply to the Treasury to see whether they desired this investigation to be carried out properly, and if they assented he was able to secure for himself and colleagues something like adequate remuneration. For a good many years Dr. Taylor had lived in almost complete retirement, and was rarely seen in public, but he always kept up an interest in this paper, he having been for many years the editor of the *Medical Gazette* prior to its fusion with the *Medical Times*, and to his labours and industry that paper owed much of the repute which it most deservedly attained.

Treatment of Pott's Disease by the Plaster Jacket.—Dr. Bradford, as the result of the treatment of forty cases by this means, arrives at the following conclusions:—1. Plaster jackets are efficient in Pott's disease when the caries is below the level of the middle of the scapula. 2. The efficiency is not due to fixation alone, nor to extension (in the proper sense of the term), but to fixation in an improved position. This improved position is usually obtained by suspension, but also in many cases by recumbency. 3. The treatment by plaster jacket requires care in the application of the bandage. A poor plaster jacket will do harm, deceiving patient and physician.—*Boston Med. Jour.*, May 13.

The Right of Property in the Dead.—A suit was recently tried in the Superior Court of Cincinnati which brought up a question never before decided. Mrs. Farley claimed to recover $5100 from Dr. Carson, one of the staff of the Cincinnati Hospital, for operating with a dissecting-knife on the corpse of her husband without her consent or that of her children. The man was a charity patient, who had died from hepatic abscess. It was pleaded in defence that the body was not cut for dissecting purposes, nor for the purpose of post-mortem examination, but to relieve it of a large accumulation of pus. The judge, in passing on a motion to arrest the case, said that the question was simply this, Has a widow such a right in the body of her deceased husband that she may have action for damages against anyone who injures the body? Neither counsel nor judge were able to find any authorities or precedents directly on this point. In all previous cases it was conceded that the relatives had a right of property in the garments and ornaments of the dead, but not in the body. That was the common law. In the present case there was no actual damage, or, at least, the only damage was to the feelings of the plaintiff. But the Court knew of no case in which action was permitted on account of injury to the feelings. As there was no right of property, and no actual damage to the plaintiff, the case was dismissed.—*New York Med. Record*, May 22.

THE DIAGNOSIS OF TUMOURS OF THE MAMMARY GLAND.(a)

In the formation of a correct diagnosis of mammary tumours it is of the last importance that both breasts be fully exposed, and that the patient be placed in the recumbent posture. With regard to the first point, little may be said, as a comparison of both glands frequently serves to clear up features which were obscure when the examination was confined to one alone. In many women who have borne children, and the more especially if the breasts be lax, if, as too commonly occurs, the organ be explored when it is partially confined by the corset, and it be seized between the thumb and fingers when the patient is seated, an enlarged or apparently enlarged lobe may be felt, which conveys the impression of a distinct tumour. If, however, the patient be recumbent, and the gland be permitted to rest in its normal position, gentle pressure with the fingers backward toward the chest will show that the supposed neoplasm has disappeared; while, if one really exist, it will not only not elude this mode of manipulation, but be rendered more prominent. The presence of a new growth having been determined, the first desire of the surgeon is to ascertain whether it be of a carcinomatous or a non-carcinomatous nature. With the view of facilitating this step of the inquiry, the affinities and contrasts of these two great clinical divisions are arranged in the subjoined tabular form, and are based upon a study of their antecedents, and of the prominent points in their general pathology. The non-carcinomatous neoplasms include fibroma, sarcoma, myxoma, and adenoma.

Carcinomatous Tumours(b)	Non-Carcinomatous Tumours.(c)
Age of Development.	
Appear, on an average, at the forty-eighth year. 77·26 per cent. develope after the age of forty, and never before the twentieth year. In impubic girls the idea of cancer may be discarded.	Appear, on an average, at the thirty-third year. 30·37 per cent. develope after the age of forty; 15·15 per cent. before the twentieth year; and 5·18 per cent. before the establishment of menstruation.
Social Condition.	
88·22 per cent. of the patients were, or had been, married, and 11·77 per cent. were single. Of the former, 83·91 per cent. had borne children, and 16·09 per cent. were sterile.	61 per cent. were, or had been, married when the tumour was first observed, and 38 per cent. were single. Of the former, 86 per cent. had borne children, and 14 per cent. were barren.
Menstrual Function.	
61·5 per cent. were menstruating when the growth was first detected.	93 per cent. were menstruating when the tumour was first noticed.
Hereditary Predisposition.	
Traceable to heredity in 11·28 per cent. of all cases.	Do not appear to be inherited.
Injury and other Exciting Causes.	
The influence of trauma is seen in 11·70 per cent. of all instances. There was an antecedent lump after puerperal mastitis in 8·21 per cent., and eczema of the nipple in 1·03 per cent. of all cases.	Ascribable to injury in 11·94 per cent. of all cases, and to eczema in 1·44 per cent. In 1·44 per cent. there was antecedent mastitis.
Situation.	
Most common at upper and outer margin, and not infrequent near the nipple.	Usually at the upper and inner circumference. Rarely near the nipple.

(a) An extract from the forthcoming work by Samuel W. Gross, M.D., published in the *New York Medical Journal* for June.
(b) The conclusions are drawn from an analysis of 712 cases.
(c) Based upon a study of 138 cases.

Carcinomatous Tumours.	Non-carcinomatous Tumours.
Outline.	
Irregular, slightly tuberous, knotted or knobby, frequently discoid, and merged into the surrounding tissues.	Round, ovoid, rarely discoid, lobed, bossed, or nodular, and distinctly circumscribed.
Consistence.	
Uniformly densely hard and inelastic throughout, except in rare instances of combination with an involution cyst, when there is a limited spot of fluctuation. As an exception may be firm and elastic, or even soft and fluctuating.	All are firm or hard at first, and frequently elastic; but not a few are soft later. Many are of unequal consistence, when they have existed for some time, in which event they are hard at some points, and soft, or even fluctuating, at others.
Multiplicity.	
Several tumours are present in the same breast in 2 per cent. of all cases.	Several tumours present in the same breast in 5·97 per cent. of all cases.
Volume and Rate of Growth.	
Never reach the dimensions of the simple tumours, and usually smaller than the breast which they have replaced. Grow continuously and comparatively slowly, and are quite liable to shrivelling of the stroma, particularly when they occur late in life.	May attain a huge size. Frequently increase by fits and starts; grow comparatively rapidly; and do not, except in rare cases of fibroma, undergo cicatricial atrophy.
Mobility.	
Move with the gland of which they form a part, and cannot be isolated. Attachments to the skin and chest are common and frequently extensive.	Glide and roll under the fingers, and move freely within the mamma and on the adjacent parts; or, if there be attachments, which are exceptional, they are limited.
Relations to Breast.	
If the tumour developes within the substance of the mamma, the latter is replaced by it, and its structure is destroyed. When it begins at the periphery, the gland is always finally invaded.	Now and then attached to the breast by a pedicle; but the gland is usually pushed to one side, spread out, or atrophied, and rarely invaded.
State of the Nipple.	
The nipple is permanently retracted and fixed in 52 per cent. of all cases, and is often infiltrated.	The mamilla, in 5·22 per cent. of all instances, is displaced, buried, or sunken, by the growth of the tumour beyond its level. Hence it is mobile and not truly retracted, and it is not infiltrated.
Discharge from the Nipple.	
A thin sanguinolent discharge is met with in 9 per cent. of all cases, but it is never copious.	A discharge, usually of a mucoid nature, is seen in 8·95 per cent. of all instances; and the escape of a bloody fluid favours the idea of vascular vegetations in dilated ducts.
Superficial Veins.	
The subcutaneous veins are somewhat prominent in 2 per cent. of all cases.	The superficial veins are enlarged and prominent in 13·43 per cent. of all examples.
Condition of the Skin.	
The skin, even when the tumour is not larger than a hazel-nut, provided it be superficial, is dimpled and adherent. In larger growths it is adherent, thinned, or discoloured, or rigid and brawny from specific infiltration, in 34·54 per cent. of all cases, and the seat of distinct nodules in 10·61 per cent.	The skin is natural when the tumour is of moderate dimensions, but thinned and stretched, or discoloured, or adherent, in 31·34 per cent. when the neoplasm is voluminous. It is never dimpled nor the seat of secondary tubers.
Fixation to the Chest.	
The tumour is attached to the pectoral muscle or thorax in 21·58 per cent. of all instances.	The tumour adheres to the subjacent structures in 2·98 per cent. of all cases.
Both Breasts affected.	
The disease extends to the opposite breast in 3·65 per cent. of all examples, but never before infection of the skin and the lymphatic glands.	The other mamma contains a similar growth in 5·22 per cent. of all cases, but without antecedent skin or gland involvement.
Ulceration.	
The formation of an ulcer ensues, comparatively early, in 23·77 per cent. of all cases. The edges of the sore are everted, thick, and indurated, and adherent to the hardened base. It never attains the size met with in the simple tumour, does not fungate, nor does it cicatrise to any great extent.	Ulceration, or limited gangrene, of the stretched and thinned integuments occurs, late in the disease, in 16·41 per cent. of all instances. It is generally attended with the protrusion of a pedunculated fungus, which is not attached to the margins of the ulcer, the edges of which are smooth, even, and not discoloured or infiltrated. The base is usually composed of intracanalicular vegetations, and it now and then heals.
Lymphatic Glands.	
The axillary glands are enlarged and hard, when the patient first comes under observation, in 64·23 per cent. of all cases, and in one out of every twenty-two instances the glands of the neck are also involved.	Enlargement of the glands of the axilla is met with in 2·98 per cent. of all examples; but it is due almost solely to irritative changes, and they are not hard. The supraclavicular glands are never implicated.
General Condition.	
The general health of the patients is, as a rule, wonderfully good when they first come under observation.	The same statement is true of the non-carcinomatous growths.
Local Recurrence.	
Reproduction after operation is met with in 80·97 per cent. of all cases.	The tumour recurs after extirpation in 27·05 per cent. of all instances.
Duration of Life.	
The average life from the first observation of the disease to the final report after its removal is 40 months; but the majority of the patients were dead.	The average life is rather more than 72 months; but the majority of the subjects were still living.

(*To be continued.*)

Composition and Quality of the Metropolitan Waters in May.—The following are the returns (by Dr. Meymott Tidy) of the Society of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, etc.	Nitrogen: As Nitrates, etc.	Ammonia.		Hardness. (Clarke's Scale).	
				Saline.	Organic.	Before Boiling.	After Boiling.
Thames Water Companies.	Grs.	Grs.	Grs.	Grs.	Grs.	Degs.	Degs.
Grand Junction ...	18·78	0·027	0·148	0·000	0·005	14·3	3·0
West Middlesex...	18·83	0·035	0·148	0·000	0·009	14·6	2·8
Southwark and Vauxhall ...	19·42	0·039	0·148	0·001	0·005	14·3	2·8
Chelsea	19·91	0·043	0·159	0·001	0·008	14·3	2·8
Lambeth	19·33	0·039	0·148	0·000	0·006	14·6	3·0
Other Companies.							
Kent	29·61	0·003	0·410	0·000	0·004	20·0	5·6
New River ...	17·72	0·016	0·137	0·000	0·006	14·6	3·0
East London ...	18·86	0·027	0·159	0·000	0·009	14·6	3·3

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours. The water was found to be clear and nearly colourless in all cases but the following, when it was slightly turbid—namely, in that of the Chelsea Company.

FROM ABROAD.

The Paris Hospital Mortality Returns.

In his report for the first quarter of 1880 (*Union Méd.*, May 1, 8, 13, and 20), Dr. Ernest Besnier observes that the second portion of the winter of 1879-80 proved less inclement than might have been expected from the unfavourable character of December. But this quarter, loaded not only with its own proper excess of mortality, but with deaths due to the numerous and severe diseases contracted in December, has attained an amount of mortality which has never before been met with since statistics capable of comparison with those now in use have existed; so that the *general mortality* of the hospitals and hospices has exceeded by 1613 the mean figure of the corresponding quarter of the eight preceding years, the total mortality of this quarter being 4754 as compared with the mean mortality of the quarter, 3141.

1. *Affections of the Respiratory Organs.*—During the first two months of the quarter these affections remained numerous and extremely grave, presenting frequently the character of *malignity* properly so called, *i.e.*, a general alteration in the condition of the individual out of all proportion to the objective characters of the disease. The lesions of the bronchi, the lungs, and the pleuræ, often associated in the same subject, constituted true fevers with thoracic localisation which it would be impossible to range in the conventional framework of anatomical nosography, and which belong to catarrhal thoracic fever and influenza. All the patients labouring under the most various thoracic affections, M. Rendu observes in his report from the Tenon Hospital, suffered from excessive prostration accompanied with but few stethoscopic signs. Ipecac and quinine constituted the means of treatment *par excellence*. To give a precise idea of the extraordinary proportion of the mortality of the quarter, Dr. Besnier compares the pneumonia of Paris, 1880, with the pneumonia of the nine last years. The mean mortality of this affection in January in Paris during the nine years was 374; it increased in January, 1880, to 670, or more than double; and it attained the same figure in February, 1880, the mean of that month being 332. The number of cases of *phthisis* in the hospitals and hospices during the quarter was 1694, and of the deaths 856. Of *pneumonias* there were 947 cases, with 343 deaths, or a mortality of 36 per cent. The mortality of pneumonia in hospitals is always more than a third higher than the true mortality of the disease, the hospital population, enfeebled by alcoholism and a thousand other causes, ill resisting pulmonary phlegmasiæ. Another cause of increase is that many aged persons, attacked by various affections, in whom an ultimate pneumonia supervenes, are, in fact, only brought in to die; while others, again, who are suffering from fatal chronic affections, and who succumb to a pneumonia, are counted as dying, not of the chronic affection, but of the intercurrent pneumonia. Of the various forms of *bronchitis* there were 1833 cases, with 123 deaths; and of *pleurisies* there were 415 cases, with 61 deaths, or 14 per cent.

2. *Diphtheria.*—The number of deaths from diphtheria in Paris, which had been increasing for several years, reached its height in 1877, since when it has continued to decline. Thus, from 2393 in 1877, the deaths diminished to 1995 in 1878, and to 1777 in 1879. For the first quarter of the year the deaths diminished from 728 in 1877, to 514 in 1880. Of 24 cases of *croup* entering the Hospital des Enfants Malades under M. Labric, 23 were operated upon: 18 of these died, 2 were cured, and 3 remained under treatment, 2 of these being in a desperate condition. At the Hospital St. Eugénie, under M. Cadet de Gassincourt, of 52 operations 12 proved successful; and of 17 tracheotomies performed for croup at the Enfants Malades, under M. Rathery, 4 were successful, and 1 of doubtful issue.

3. *Small-pox.*—According to the seasonary law of its progress, the small-pox of Paris took on a sudden increase in the first quarter of the year, passing from 52 in the last quarter of 1878 to 151 in the first quarter of 1879, and from 330 in the last quarter of 1879 to 798 in the first quarter of 1880; so that for the first time since the great epidemic of 1870 (when the mortality during the first quarter of the year reached 896) small-pox has again become a true public disaster. (The number of deaths from small-pox registered in Paris for the twenty-two weeks of 1880 ending June 3 was 1331.)

4. *Measles.*—It is only in the second quarter of a year that this affection reaches its height both in the civil and hospital population of Paris. In this first quarter there were only 80 cases admitted into the hospitals, but these were attended with the high mortality of 16.

5. *Scarlatina.*—Of this there were only received into the hospitals during the quarter 56 cases, with a mortality of 7; but M. Besnier observes that observations made in the hospitals only furnish a very insufficient idea of the prevalence and mortality of scarlatina in civil practice. The well-to-do population of the capital have manifestly suffered much more from the disease than usual; malignant, anomalous, and complicated forms having been very frequent. Although the disease continues to be infinitely less prevalent than in London, its increase is obvious.

6. *Typhoid Fever.*—This has undergone an extraordinary exacerbation this quarter. The deaths have amounted in Paris to the enormous number of 744, whereas the mean mortality of the quarter, calculated on the years 1872-79, is only 240. This great increase may be to some extent explained by the remarkable rarity of rain supervening on the long stagnation of water, snow, and detritus of all kinds on the surface of the soil.

Therapeutical Employment of Nitrous Oxide Gas.

At a recent meeting of the Medical Society of New York (*New York Med. Record*, May 15, and *Boston Med. Jour.*, May 13), Dr. Allan Hamilton reported that he had met with a very encouraging degree of success in the employment of this substance in many cases of depression of spirits, insomnia, neuralgia, melancholia, and hypochondriasis, so that he regarded it as a nervous stimulant of great value. It was found to increase the activity of the heart and the arterial tension, while, if its administration were carried sufficiently far, it would induce its ordinary anæsthetic effects. He found that the temperature was not much disturbed by it, though one of the good results usually produced was an increased warmth of the extremities. Its general effects resembled those produced by oxygen, on account of the exhilaration of spirits caused by it. It was of great service in many nervous and mental disorders; and under its use, in his hands, taciturn and melancholic patients had become contented and cheerful. In melancholia dependent on disturbance of the menstrual functions, as well as in various forms of hypochondriasis, it had proved very useful. The susceptibility to its influence varied very greatly in different individuals, and Dr. Mitchell had found that in some instances no less than four gallons of gas were required before any symptoms whatever were produced. When any tendency to mania is present, it should not be given, as being then either useless or mischievous; nor should it be used when organic disease of the heart or a plethoric state of the system is present. In anæmic conditions, on the other hand, it is often of the highest service. In a case of amenorrhœa (without appreciable uterine disease), accompanied by very severe headache, it acted most happily; and in several cases of sick-headache it had not only successfully broken up the attack, but had prevented a return. So in hemicrania, facial neuralgia, sciatica, as well as in many cases of insomnia, it had also proved very useful. When given for the latter condition, it had been found best to administer the gas in the middle of the day instead of just before retiring. Those suffering from functional heart-trouble, and chlorotic young women, were much benefited by it; and the same was true of individuals who had used tobacco to excess. A very useful application of the gas, also, was in the case of those addicted to the use of alcohol or opium, and who had been induced to give up their accustomed stimulus.

At the discussion which followed the reading of the paper, Dr. Blake observed that he employed a method of inhaling the gas which he regarded as of considerable importance. He had found that it was advisable that once in from three to five respirations the patient should be permitted to take a full inspiration of atmospheric air. In this way the gas was taken in smaller doses, and had the effect of a gentle stimulant, without producing intoxication at all. If, during the inhalation, flushing of the face or any other evidence of

intoxication were observed, even a larger amount of air should be admitted. He ordinarily found that, administered in this way, one bag of gas was sufficient for a sitting. Dr. Blake regards the agent as a diluted, diffusible, stimulant tonic. The manner in which it operated seemed to be as a diffusible stimulus, with no tendency to subsequent depression or reaction, when given so as not to produce any evidence of intoxication. It was possible to administer the gas in small doses, so as to produce a gentle tonic influence. He had employed it with excellent result in cases of insomnia, melancholia, anorexia, and nervous exhaustion. Its good effects seemed to be entirely confined to anæmic and asthenic subjects, and he had never seen it prove of any service in plethoric individuals. Dr. Macdonald remarked that he had not used the agent for a sufficiently long time to judge of its effects as regarded final recovery; but that he could speak favourably of it with respect to its temporary benefit. Its use is indicated in cases of depression, with tendency to melancholia, especially with an epileptoid condition. He referred to cases in which, after having for long refused all food, patients, after inhaling one or two gallons of the gas, readily went to table of their own accord. For slight surgical operations among the insane, and, above all, in uterine cases, it answered a good purpose. Dr. Beard observed that the general conclusion to be drawn from physiological experiments was that the effects of the gas were temporary, although of a decided character; and he believed that the results of its employment would, as a rule, be only temporary. But everything which even assisted only temporarily was to be heartily welcomed. The single symptoms insomnia and depression are so prevalent that if we can only have something to remove them readily, it might tide the patient over the point, perhaps, of committing suicide, and in this way the agent might prove very beneficial. Dr. Goodwille observed that if the border-line between stimulation and anæsthesia were crossed, the good effect of the gas was lost. The point of anæsthesia must not be reached if the stimulant effect is to be retained. The circulation in the lobe of the ear, together with the respiration and general aspect of the face, were what he relied upon in determining when the person was approaching to anæsthesia.

Irish Medical Association.—At the first meeting of the recently elected Council of this Association, held on Friday, June 11, the following were chosen officers of the Council:—*Chairman of Council*: Dr. J. W. Moore. *Honorary Secretary to Council*: Dr. Robert Browne. *Honorary Secretary of the Association*: Dr. Albert O. Speedy. *Committee of Council*: Drs. Jacob, Peele, Purcell, Pollock; and *Honorary Treasurer*: Dr. Humphrey Minchin.

The Mud-Banks of the Thames.—In connexion with the recent arbitration between the Metropolitan Board of Works and the Thames Conservators in the matter of the main drainage outfalls, Sir J. W. Bazalgette has presented to the Works Committee of the former Board a report upon the whole inquiry. He says:—"The inquiry has been an exhaustive one, and the decision of the arbitrators is unanimous and so decisive in its terms that it may be said—for the next generation, at any rate—to have set at rest the agitation which has been so needlessly fermented during the last ten or twelve years. The effect of the award, therefore, has been to save a useless expenditure of public money in dredging away mud-banks actually caused by such dredging operations, and liable to more rapid accumulations of mud in proportion as the dredging was increased. The misconception of the Conservators as to the nature and real cause of these accumulations, had it not thus been clearly and authoritatively explained, must have resulted in the ultimate removal of the outfalls to sea at an expenditure of millions of money. The inquiry was narrowed, doubtless under the advice of the Conservators' counsel, to the formation of the banks near to the outfalls, because they saw that sufficient evidence could not be produced to justify the smallest hope of a decision in favour of the more wild and groundless statements that the banks above and below the outfalls were formed by sewage deposits from them, or that the water in the river is polluted by them to such an extent that it can be called a nuisance, or is even perceptible to the senses."

REVIEWS.

Hay Fever: its Causes, Treatment, and Effective Prevention. Experimental Researches. By Charles Harrison Blackley, M.D. Second Edition. London: Baillière, Tindall, and Cox. 1880. Pp. 281.

The treatise before us is one of the fullest that we are acquainted with on this subject; and its appearance just at the time of year during which the disease usually manifests itself will no doubt be appreciated by those whose misfortune it is to suffer from hay fever, as well as by practitioners who may be called upon to relieve the distressing symptoms by which the disease is accompanied. We gather from the preface that the author is himself liable to this disease; and if this be correct, the result of his own experience, no doubt, places him in the best position to write with authority on the disease.

It is seven years since the first edition was published, and the interval of time has been largely occupied in a series of experimental researches undertaken for the purpose of elucidating some of the moot points in the natural history of this disease. We are rather surprised to learn that the disease is largely confined to our own country, where it seems to have had its birthplace. It is, according to the writer, an "aristocratic disease," and, he says, "there can be no doubt that, if it is not almost wholly confined to the upper classes of society, it is rarely, if ever, met with but among the educated." We believe that, whether aristocratic (as gout was at one time reputed to be) or not, hay fever is unquestionably an affliction of the educated classes. In Chapter II. our author reviews the various opinions which have been or are held on the causes of the disease. In some cases high temperature with dryness of the atmosphere has been held to be sufficient to produce the disease; by others an opposite condition, a high temperature with excess of moisture. Some authors consider ozone as a possible exciting cause. Odours again, as of the lilac, the rose, and of the peach, have been blamed. In some cases common dust of almost any kind is believed to have been the exciting cause. Hay, or rather the pollen of a particular grass, has been regarded as the real cause by many observers, and to this fact is due the name by which this disease is best known.

On the other hand, authors seem all agreed on one point, that there is a peculiar constitutional proclivity. In the third chapter the presumed causes are experimentally discussed. We must pass them over for want of space. The author has minutely detailed the results of his experiments; and a perusal of his observations will well repay any who are interested in careful work, though they do not seem to have added to our knowledge. It may be stated that the general outcome of the experiments is to prove that the pollen of certain grasses is the source of the disease; and this is nothing new. In Chapter VII. the author carries his investigations still further, and thus arrives at conclusions as to the amount of pollen which suffices to produce and keep up the disease. This amount is so infinitesimally small, that in the hands of a less careful observer we might almost be excused a doubt. It is stated that "rather less than the $\frac{1}{3127}$ of a grain of pollen inhaled in each twenty-four hours will keep up hay fever in its severest form."

We can only just glance at the methods of treatment which are recommended. Drugs do not seem to have been very successful. The author knows of no specific, though many drugs are capable of mitigating the symptoms; and here again Dr. Blackley's researches leave us very closely where we were before. It appears that carbolic acid is the most effectual, acting probably in this disease much as it does in the so-called antiseptic dressings.

We have read this book with pleasure, and recommend it cordially to those who may wish for a full and practical work on this once very mysterious disease. There are a few clerical errors; but otherwise the work is well printed, and creditable to the firm whence it issues.

Nordiskt Medicinskt Arkiv (*Archives of Northern Medicine*). Edited by Dr. Axel Key, Professor of Pathological Anatomy at Stockholm. Volume XI., Nos. 2, 3, and 4. 1879. Stockholm.

This journal comprises contributions on medical science from Denmark, Norway, Finland, and Sweden, and the chief

editor is assisted by collaborateurs in Helsingfors, Christiania, Copenhagen, Lund, Stockholm, and Upsala. The contents are various, valnable, and interesting, and the following brief abstracts of a few of the papers will indicate in some degree the results of the labours of our *confrères* in the North of Europe.

"Om Rekurrensepidemin i Helsingfors under Åren 1876-77, äfvensom samma Sjukdoms Uppträdende i Finnland" ("On the Recurrent Epidemic at Helsingfors in the Years 1876-77, and the Progress of this Disease in Finland"), by Hugo Holsti, of Helsingfors.—It seems that the disease here described had presented itself on previous occasions in Finland, having appeared at Helsingfors in company with spotted typhus, and probably introduced from Russia. At the beginning of August, 1876, it appeared again at Helsingfors at two separate points, and without it being possible to trace its introduction from without. The disease was concentrated almost exclusively among the poorest classes, its principal cause, according to the author, being the bad hygienie conditions of the dwellings, which were dirty and crowded with inhabitants. In one group of houses, where the insanitary conditions were at their maximum, no less than 146 cases of recurrence were observed among 560 inhabitants. Wherever the recurrence was remarkable for its intensity it was not accompanied by any other infectious disease, although scarlatina and diphtheria prevailed epidemically in other parts of the town. The mortality was considerable, and gave a proportion of thirteen deaths in 437 cases. The death-rate was much greater in the hospital than among the patients attended at home, the deaths seeming to be due to paralysis of the heart, and post-mortem examinations showed that the cause of the paralysis was an extensive fatty degeneration of this organ. In forty cases spirillæ were found in the blood. The author tried the effect of salicylate of soda in the treatment of the disease, but the results were not very favourable.

"Resektion af Refben vid Kroniskt Empyem" ("Resection of the Ribs in Chronic Empyema"), by Professor Estlander, of Helsingfors.—The author observes that in many cases of empyema the suppuration is indefinitely prolonged in consequence of the want of adhesion between the lung and the thoracic wall, so that the former may shrink completely, and thus leave in the pleural eavity a space impossible to fill up, the ribs not being able to contract sufficiently. In such cases he proposes the resection of several ribs, to the number of three to six, or even a larger number; the objects of the proceeding being to gain complete retraction of the outer wall of the chest, and satisfactory drainage of the cavity. The point to be chosen for the operation is the part of the chest below the axilla, because that region is uncovered by large muscles. The author generally makes transverse incisions corresponding to the costal interstices, a single incision permitting him to lay bare two ribs, and sometimes three, and thus to accomplish the operation required. He gives the particulars of six cases in which he has adopted this plan of treatment: one of them died, but all the others recovered, although three left the hospital before the definitive closure of the wounds. It is mentioned that the resection should always be sub-periosteal, and that the operation and the subsequent dressings should be performed with the modern antiseptic precautions. A paper on the same subject as Professor

"Strictura cancrosa Œsophagi—Gastrostomi" ("On Cancerous Stricture of the Œsophagus—Gastrotomy"), by Dr. C. Studsgaard, of Copenhagen.—The author shows that epithelioma, the most common form of œsophageal cancer, generally destroys life by ulcerating and perforating the adjacent parts; sometimes by the effect of the cancerous cachexia; and sometimes, though rarely, by inanition, the contraction increasing until the canal is more or less obliterated. The treatment has generally been limited to temporary and progressive dilatation, but there are four other kinds of treatment—namely, the resection of the œsophagus, internal œsophagotomy, external œsophagotomy, and gastrotomy. The last operation is indicated in cicatricial strictures resisting dilatation, in cases of congenital occlusion of the œsophagus, and in cancerous strictures where the question of nutrition becomes pressing, and where resection is impossible. As to the operation itself, the author thinks that the oblique incision parallel to the curve of the ribs is preferable to the vertical one along the external border of the rectus muscle. A case operated upon by the author is related, in which there was a cancerous stricture in the superior cervical region. The patient lived half a year, and at the autopsy the œsophagus was found completely closed by a tumour of epithelial cancer.

"Forsog over Limens Näringsvärdi" ("On the Nutritive Value of Gelatine"), by H. P. Örum, of Copenhagen.—Experiments have formerly been made on the lower animals as to the nutritive value of gelatine, but hitherto the results have been unsatisfactory, because the animals died either from intolerance of the aliment or from superinduced disease of the bowels or the kidneys. But later experiments have been more successful, and the results are recorded in the present paper. The experiments are divided into two sections—the first being those where the alimentation consisted of gelatine and water, and the second where the gelatine was given in mixed food. The principal results obtained were the following—namely, that the same quantity of nitrogen consumed in the form of gelatine induces a much greater formation of urea than in its consumption under the form of meat, but that the alimentary value of meat is infinitely greater than that of gelatine, because the organism spares the nitrogen in alimentation with meat, while in alimentation with gelatine the body is forced to consume a part of its nitrogen. An addition of gelatine to an aliment composed of hydrocarbons and of fat increases notably the production of urea, and a certain amount of nitrogen is spared for the organism—a circumstance which has the effect of diminishing the daily loss of weight, to which must be added a much more complete simultaneous digestion of starch and fat so as to diminish in a very sensible degree the quantity of the excretions.

"Om Kombinerte Bright'ske Sygdomme" ("On the Combinations of Bright's Diseases"), by Dr. Edward Bull, of Christiania.—At the beginning of this paper, which is a long and elaborate one, the author shows that the reaction against the unitary theory of the morbus Brightii has gone rather too far in principle in attempting to classify each case of this affection under a simple form distinct from all others. Then, entering on the special combinations of the different maladies comprised under morbus Brightii, he examines the relation existing between atrophy and amyloid degeneration, and he maintains his first view of the question—namely, that the amyloid kidney never undergoes secondary atrophy, and that the third period of the amyloid kidney described by authors does not exist, and that in all cases where post-mortem examination reveals the process of atrophy in amyloid kidneys there is really a "combination" of true granular atrophy with secondary amyloid degeneration, or the case is one "complicated" with renal atrophy due to different causes, with secondary amyloid degeneration. He quotes from his own experience, obtained from about eighty autopsies of amyloid kidneys, five cases in support of his views. To the special discussion of the questions mentioned in the preceding part of the paper the author has added, as far as he could, diagnostic considerations in all possible combinations, and the result is, that without being always able to make a diagnosis, it is often possible to make one of greater or less certainty, or to arrive at least at a probable diagnosis of the combinations, which is not without value in the prognosis. In concluding the paper, he urges the necessity of studying afresh, in cases whether combined or not, the different symptoms recognised as belonging to Bright's disease, so as to ascertain if these symptoms can be referred to certain definite forms. He examines the question of uræmia as far as his space permits, and he gives as the probable result of his investigations, that among the uncombined forms of Bright's disease uræmia is produced exclusively in parenchymatous nephritis; that it *may* present itself also in all the combinations, especially in that of renal atrophy with nephritis, and certainly much more frequently in such cases than in parenchymatous nephritis alone; that uræmia is much more rarely met with in renal atrophy with amyloid degeneration, and that the question is still undecided whether nephritis does not present itself simultaneously in these cases; and, lastly, that uræmic attacks are very rare in amyloid degeneration combined with nephritis.

"Undersökning öfver Cerebrospinalgangliernas Nervceller med Särskild Hänsyn till dessas Utlöpare" ("Researches on the Nervous Cellules of the Cerebro-spinal Ganglia, and especially on the Prolongation of these Cellules"), by Professor Retzius, of Stockholm.—In this paper Professor

Retzius describes some new researches made by him on the nervous tubes of the cells in question in the frog, the cock, the rat, the rabbit, the cat, the dog, and man. He found in the spinal ganglia of all these animals rather numerous divisions of the myeline nervous tubes; the nervous cellules never exhibited more than a single prolongation becoming a myeline nervous tube, and he succeeded in several cases in following this tube to a division exactly of the same kind as the other divisions of the nervous tubes; and this was the case in the representatives of the different classes of the lower animals as well as in man. He examined several of the ganglia of the cerebral nerves, but at present he publishes only his researches on the Gasserian ganglia, and on the jugular ganglia of the vagus, in which he finds exactly the same relations as in the spinal ganglia.

GENERAL CORRESPONDENCE.

THE CALCUTTA HOSPITALS.

LETTER FROM DR. J. IRVING.

[To the Editor of the Medical Times and Gazette.]

SIR,—I fear you may think you have already had too much correspondence on the subject of the Calcutta Hospitals, but I trust you may be able to find room for the following extract from a letter I have had from a friend in Calcutta, illustrating what I have said in your columns regarding the objectionable mode in which the so-called "hospital reforms" are being carried out. The extract is as follows:—"Each medicine of any expense has to be initialed on the prescription, so that each physician and surgeon at the College has to make about twenty initials a day."

I am, &c., JAMES IRVING, M.D.,
Late Surgeon-General to the Government of Bengal.
Edinburgh, June 12.

EFFECTIVE ISOLATION FOR SMALL-POX AND OTHER ZYMOTIC DISEASES.

LETTER FROM DR. FREDERICK CHURCHILL.

[To the Editor of the Medical Times and Gazette.]

SIR,—I observe that you have published a *verbatim* report of Dr. Collie's paper on small-pox as read before the Society of Medical Officers of Health. I conclude, therefore, that you attach considerable importance to the enunciation of views upon the preventive treatment of this disease. I need, then, make no apology for troubling you with a critique upon some of the suggestions made by the author of the paper. I am fully persuaded that the subject is one of considerable interest to the profession, and, being now *sub judice* in the matter of the Hampstead Hospital inquiry, it needs to be looked at from a sanitary, social, and polemical standpoint. I would not attempt to criticise Dr. Collie's observations as they concern the management of a small-pox hospital: I prefer to combat the conclusions as an outsider rather than as "one engaged in the fray."

"Small-pox," says Dr. Collie, "is for us practically the most contagious, and, judged by per-centum mortality, the most dangerous of all" contagious diseases. "It appears to attack at once all susceptible persons immediately on their exposure to it." "The precautions which are sufficient for the other contagious diseases are not sufficient for this one." I shall found my remarks upon these prefatory statements.

Arguing from such premises, the author would establish "small hospitals in the densely crowded parts of large cities where the disease is likely to be most frequent," so as to facilitate prompt removal of mild and severe cases. Such hospitals, he thinks, "need not be a source of danger in a properly vaccinated neighbourhood."

Dr. Collie would also allow relatives and friends regularly to visit the bedside of the patients, and to perambulate the wards, subject only to the consent in each case of the medical superintendent. The arguments in defence of these two statements are based upon grounds of supposed expediency to remove popular prejudice, and to provide additional facilities for the transference and treatment of a greater proportion of the infected within the walls of the district hospital. Such arguments, so far as they go, are, of course, incontrovertible. All will agree as to the desirability of breaking down prejudice and removing the sick out of the often pestilential atmosphere and pernicious surroundings of their own homes.

Judging from my own observations, however, I do not think that distance has much to do with determining the friends to comply with the recommendation of the medical attendant. Doubtless those who would oppose removal belong to a class (and their name is legion) who have ingrained into their very nature a rooted antipathy to the parish beadle (be he the constable, the nuisance inspector, or the school board visitor); this contingent being largely recruited from the Emerald Isle.

But the law is clearly on the side of sanitary science. The fever patient can always be removed *nolens volens*, "if without proper lodging and accommodation." This comprehensive clause in the Sanitary Acts can be made sufficiently elastic to consign to a hospital lodgers, domestic servants, and almost anybody not living in a self-contained house. It is for the medical attendant to encourage removal in the early stages of the disease. If, as Dr. Collie says, small-pox is the most contagious of all diseases, it becomes the duty of the State to stamp it out with all the energy at command. To establish numerous foci for aggregating the infected "in densely crowded parts of large cities," with only a hundred feet of space between the hospital and the nearest dwellings, would seem to favour the dissemination of the disease rather than its eradication. The larger the hospital, the better it is managed, as a rule; the officials are better paid, the sanitary arrangements are more perfect, the situation and surroundings more favourable to complete isolation. If yellow fever were to visit our shores, how careful we should be to isolate the victims of the disease! Why put a sanitary *cordon* round every infected ship, to the great inconvenience of passengers and crew, and use less precaution in a district where small-pox is raging? The opponents of rigorous espionage would soon be tranquillised when they find that not only is the epidemic being suppressed, but that the mortality among their infected friends and relatives is markedly less than if they had been treated at their own homes. It would be just as easy to move the patients four miles as two, and in so doing we should gain two things, viz., the incarceration of the disease in an apparently impregnable fortress outside the range of aërial or terrestrial communication, and the treatment of it in a purer atmosphere. With regard to the admission of friends, I cannot reconcile such advice with the strong evidence in proof of the grave character of the disease, and its tendency to spread. Still less can I understand the necessity of excluding 'the butcher, the baker, and the candlestick maker,' as being the habitual and, I think, necessary visitors to the precincts of the hospital. If the building were constructed, as Dr. Collie suggests, with its executive offices entirely shut off from direct communication with the patients, what harm could accrue to the tradesmen calling for orders or leaving the food at the steward's office? It is not likely that the butcher's boy will, clandestinely or otherwise, care to have much intercourse with the servants or inmates.

If the patient, instead of having small-pox, has a slight aberration of intellect, the relatives are willing enough to leave such to the tender mercies of the asylum doctors for months without visiting them? and why be more considerate of friends in the case of a disease which science tells us will spread, and that fatally, unless properly garrisoned?

Once make provision for the patients to see their friends, and the servants and officials will require it too, and be lax in other things.

The remedy for *ennui* among the officials would be to shift them frequently from one hospital to another, and to encourage the short-service system. It is now generally admitted, as in the debate on Dr. Collie's paper, that the disease clings to the neighbourhood of a hospital like bees to a hive. Much needless prejudice against fever hospitals has thus been aroused.

In all large cities, adequate provision must be made for fever hospitals, and it only remains for the governing body to see that the rules are rigidly kept in force to keep the officials away from the neighbouring houses. I would have one large well-appointed hospital in every postal district, excepting the E.C. and W.C. districts.

I quite agree with Dr. Collie as to the desirability of conveying the poor, as a rule, to the small-pox hospital, on

account of the much purer atmosphere, and consequent dilution of the poison.

If Dr. Collie is correct as to the power of small-pox to strike at once or not at all, we have at our command a new prophylactic, which, failing vaccine, might prove serviceable! Immunity after exposure to the virus will continue, he says, *e.g.*, from puberty for the rest of life.

We must always remember that a certain number of eccentric people are continually running foul of every Act of Parliament. Unless the medical man has the supreme authority (subject to certain safeguards) in reference to all matters of public health, an Act of Parliament is sure to become a dead letter.

A medical man cannot be trusted, they say, to order the incarceration of an habitual drunkard, and yet no other power on earth can persuade the man to give up the liberty he now enjoys of making his home a pandemonium, and so the Act is of no avail for the clever scoundrel.

The same argument applies to those who, having the offer of a palatial hospital with all its comforts, prefer the freedom of their wretched homes. I am, &c.,

Frederick Churchill,
Assoc. Soc. Med. Officers of Health.

REPORTS OF SOCIETIES.

EPIDEMIOLOGICAL SOCIETY.

Wednesday, June 3.

Sir Joseph Fayrer, K.C.S.I., M.D., F.R.S., President, in the Chair.

Endemic Plague in India.

Dr. Francis read a paper on endemic plague in India, of which the following is an abstract. After pointing out on a map of India the position of Kumaon and Gurhwal, the only portion of the Himalayan chain in which the plague (known locally as mahamurree, poohkiarog, and golarog) has appeared, although others are perhaps in a state quite as insanitary, the author alluded to the ethnology of the people, who claim a Rajpoot descent, and gave a brief sketch of the physical geography and geology of the country and of the approaches to it from the plain and from Thibet. Of the ground available for this purpose there is but little, comparatively, under cultivation. The population is sparse and scattered. The people (though they do not often show it) possess but little stamina, their food consisting chiefly of cakes made from certain grass-seeds, and simple herbs, in which nettles abound. The Kumaonee wears cotton, the Gurhwalee woollen clothing; this last affording a favourable nidus for the residence of the mahamurree poison. The personal habits and general surroundings of both classes (of the Gurhwalee especially) are filthy in the extreme; overcrowding and defective ventilation are conspicuous; and, to make the conditions necessary for the development of epidemic disease as complete as possible, the plague-stricken dead are superficially buried by the survivors in a rocky soil in the immediate vicinity of their homes on the eve of an outbreak of mahamurree. Rats are found dead in the morning, as if suffocated, on the floor of the sleeping apartments; and dead snakes are occasionally picked up near the villages, with, now and then, it is said, a jackal. Mahamurree, known since 1823, but in existence probably much earlier, frequently accompanied by glandular swellings and hæmorrhages, and characterised in its most fatal forms (carrying off 95 per cent. of those affected) by the extreme brevity of its attack without any prominent symptoms, is endemic bubonic plague, caused by an animal poison which is generated by the operation of local conditions. It is in no way modified by malaria, which here, as in other parts of India, induces intermittent and remittents. Cholera is sometimes fatally prevalent, as is foot and mouth disease in cattle; but both exist quite independently of mahamurree. The disease usually breaks out towards the end of the rains, and continues (often) till the beginning of December, when it is quiescent. It may break out again in March and continue till May, when for the time it disappears altogether. It is intensely contagious amongst the people themselves, but the pilgrims who annually visit the shrines, situated near the snow-clad peaks and the Bhotigehs, who, living in villages from 7000 to 12,000 feet above the sea's level, and conveying merchandise between the plains of India and Thibet, and *vice versâ*, are, it is believed, never attacked—at least, not in the present days. Europeans, too, escape, and yet several medical officers have been brought face to face with the disease. The author of the paper saw, when co-operating with Dr. Pearson, ten cases collected from fifty villages, and assisted in making four post-mortem examinations and in dissecting a plague rat. In discussing the diseased-grain theory of the origin of mahamurree (in connexion with which it has been urged that whilst the rat died from eating the grain, the snake died from eating the rat, and the jackal from eating the snake) the author pointed out that if this were so, the cats, *à fortiori*, should succumb, as should the bears (who in these hills are very carnivorous), to the corpses of mahamurree victims; but neither bears nor cats are ever found dead. The author referred to the Pali plague—a disease having much the same general characteristics as mahamurree—which, first known in the West of India in 1815 (though not then under that name), and becoming quiescent after existing for four years at various points not far removed from that of its origin, reappeared in 1836 at the village in Marwar, which gives to the disease its present name. It finally disappeared in the hot season of 1837, since which date, while mahamurree breaks out from time to time (especially when hygienic regulations are relaxed), it has not been heard of. And yet, said Dr. Don, at the conclusion of the paper, Pali was twenty years ago in an insanitary condition, and, being in a native State, is doubtless still as bad as ever. Probably, as Dr. Lawson observed, there is a law affecting the reappearances of epidemic disease, in which case we may see the Pali plague again some day. During this last exhibition of the Pali disease, fevers of various kinds were raging throughout the tract of country that intervenes between this part of the West of India and that part of the Himalayas where mahamurree maintains its ground. Thus, while the Pali plague was in Rajpootana, remittent was very prevalent in Jilwarra; intermittent in Jeypoor and the district around it; and in Rohilcund, up to the very foot of the hills, where mahamurree was rife, a kind of yellow fever was decimating the country. It seemed as if a common factor was at work, leading to the development of epidemic diseases, each, *sui generis*, being brought out under the influence of local conditions. Whilst acquiescing in the opinion that both the Pali and Himalayan plague might be imported—the former through the medium of the *chippales* or cotton-workers, amongst whom it first appears, receiving plague-infected merchandise from Egypt *viâ* Surat, and the latter by pilgrims,—the author strongly believed that in both cases the local conditions favourable to the development of plague were abundantly in operation, requiring no assistance from without; and that, as had been most satisfactorily proved in the case of mahamurree, sanitary reform, rigidly enforced, was efficacious in preventing it. He added that if the coming generation, taught in schools the value of hygiene, would co-operate heartily with the authorities in carrying it out, there was no reason why mahamurree, like other pestilential diseases in other countries, under similar circumstances, should not be finally eradicated from the paradise of India.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, June 8.

John E. Erichsen, F.R.C.S., F.R.S., President, in the Chair.

Case of Basic Cavity of the Lung treated by Paracentesis.

Dr. R. Douglas Powell and Dr. R. W. Lyell contributed a paper on a case of basic cavity of the lung treated by paracentesis. The case related was that of a man, aged forty-nine, of previous good health, but intemperate habits, who in December, 1878, had had bronchitis, followed in the ensuing February by pleuro-pneumonia and fœtid expectoration. He improved after a time, but relapsed again in July, and in August was admitted into the Middlesex Hospital under Dr. Powell's care. On admission, the physical signs showed consolidation of the lower lobe of the right lung, with excavation

of its central portion, the cavity signs being centred about the level of the seventh dorsal spine in the line of the angle of the scapula. There was considerable hectic, with diarrhœa and anorexia. The breath and expectoration were extremely fœtid, the latter being muco-purulent in character, and very abundant, amounting to about one pint in the twenty-four hours. The area of excavation having been carefully marked out, the operation of paracentesis was performed by Mr. Lyell on September 11. A medium-sized aspiration-trocar was first thrust in at the eighth space mid-scapular line, and a free incision having been made through the tissues down to the intercostal membrane, the fine trocar was withdrawn and a full-sized hydrocele trocar inserted, which, after slightly enlarging the opening, was in its turn removed and a large drainage-tube introduced. Carbolised dressings were applied. A moderate quantity of secretion escaped from the wound (which gave rise to no serious bleeding), and the discharge subsequently from the tube, although free, was never abundant. The expectoration and cough, however, at once almost entirely ceased. The wound was dressed daily under the carbolic spray, with the view of disinfecting it and the cavity, and injections of Condy's solution were used. On October 2 there was some return of fœtor of breath, that of the discharge from the tube having never been quite corrected. Some trouble was occasioned by the tube slipping out, its reintroduction being hindered by encroaching granulations, and the tube was felt to strike against some impediment deep in the lung. The channel was kept dilated, however, and the patient improved in strength, and on the 20th was transferred to the Brompton Hospital. Fœtor of sputa returned towards the end of the month, however, although the amount expectorated continued to be very scanty. The patient lost ground rapidly, and was finally seized with pleuro-pneumonia on the opposite side, of which he died on October 31, fifty days after the operation. The post-mortem examination revealed the presence of several inter-communicating cavities in the lower lobe of the right lung. This lobe was firmly adherent throughout, and a drainage-tube, passing through the eighth intercostal space, entered a contracted cavity, which was connected with the main cavity by a short dilated bronchus. This small cavity must have been closely sub-pleural, and was the very lowest of the series, although at so high a level as the eighth space it was only separated from the diaphragm by one-eighth of an inch. It was evident that in contracting upon the tube the wall of the cavity had come in contact with and partially occluded its extremity. The rest of the lobe was densely consolidated by fibroid growth surrounding bronchiectatic cavities. There was broncho-pneumonia and effusion on the left side. The rest of the lungs were emphysematous. In their remarks upon the case the authors commented upon the infrequency with which the base of the lung had been tapped, and pointed out that the immediate cessation of cough and expectoration after operation in this case was a fact very encouraging to future interference with such cavities under more favourable circumstances, and also afforded a valuable hint respecting the importance of disinfecting lung-cavities. For it was clear from the small amount of the discharge, compared with the great previous quantity of expectoration, that the bulk of that expectoration had been yielded by the bronchi irritated by the acrid fluids and gases in their passage from the cavities. Whilst advocating the puncture of chronic basis cavities in suitable cases, the authors deprecated interference with apex cavities, on the ground of its being rarely necessary or useful, and are averse save in exceptional instances to making incisions into acute basis abscesses of the lung. In the present case, however, the operation had undoubtedly been postponed too long, the patient having come under observation too late. The diagnosis of the case from empyema was touched upon, and the several steps of the operation discussed; the use of a large trocar in preference to the knife being advocated. In future cases, too, the authors would prefer to choose the centre of the cavity rather than its lowest point for puncture, where it is situated in the posterior lobe of the lung.

Dr. Symes Thompson thought the operation advantageous in selected cases, but it did not suit where the disease was acute or where the pleura was not adherent. When the inflammation was of a gangrenous character, or where the patient's health was very bad, it might be performed, but not, he thought, until recovery by any other procedure was nearly hopeless. There would always be great difficulties as to diagnosis, for to be successful the putrid cavity must be near the surface, and these cases are not very numerous nor easy to make out.

Dr. Barlow said that no treatment of suppurating cavities could be satisfactory without good drainage. In the case narrated the opening was sinuous, and hence the drainage could not be very good. He would make a double opening as in empyema. It was easier to get the cavity cleaned out in this way. In empyema he fixed the tube by a thread round the body.

Dr. Silver called attention to the fact that the discussion was on tapping cavities in the lungs, not on empyema, and that wandering into that subject would be irrelevant.

Dr. Theodore Williams quite agreed that the discussion should be restricted to the subject of tapping pulmonary cavities, but that in every instance the nature of the case had to be considered. Thus the operation might be useful in certain forms of bronchiectasis, but these could not easily be reached. The removal of the putrid fluid was all-important, as the other lung might be poisoned by the exhalations. In one case he tapped a limited empyema, thinking it a bronchiectasis. In most cases of phthisis, the cavities, being in the upper part of the lung, drain themselves. He referred specially to a case where the President had operated for him with very great advantage.

Dr. Reginald Thompson thought that the operation should really be considered as a means of preventing septic influences on the other lung, and should therefore be undertaken as soon as possible. There was often rapid breaking-down of one lung, and then the other became infiltrated by inhalation with its products.

Mr. Erichsen said that in these cases the great thing was drainage, and that antiseptics did little or no good. The patient was really poisoned by his own secretions. He would make a free opening and get rid of the foul material. In the case referred to by Dr. Theodore Williams the whole house was infected, and the smell could be perceived to the very door, yet when the collection of stuff was opened the whole fœtor rapidly disappeared. Care should always be exercised in the selection of a tube; they should be rigid, to obviate any risk of forming an acute angle. He had found a flat trocar with a vulcanite canula the best instrument to use, but if he had to do it again he would rather pass in a director, and then gradually tear with dressing-forceps, than cut. Injection of fluid only seemed to irritate. In Dr. Williams's case an emphysema set in all over the body, and at each cough it could be seen to increase. This air, although intensely fœtid, produced no bad effects on the body.

Mr. Holmes, with regard to the last point, mentioned a case of emphysema connected with the rectum, but neither here was there any damage to the tissues from the foul air.

Dr. Powell, in reply, said there was a difficulty as to the time of the formation of the various cavities; perhaps one formed first, and the others were secondary. He did not favour the idea of a double opening. Only a small quantity of fluid was removed, yet the expectoration ceased at once, perhaps owing to cessation of the irritation to the bronchi.

Mr. Lyell said that in another case he would prefer a metal tube.

The annual dinner of Fellows of the Royal College of Surgeons of England will take place at the Albion Tavern, on Thursday, July 1; Sir James Paget, Bart., F.R.S., in the chair. Fellows of the College wishing to dine should communicate with the Hon. Secretary, Mr. B. T. Lowne, 65, Cambridge-gardens, Notting-hill, W., not later than the 28th inst.

Bradford Medico-Chirurgical Society.—The eighteenth annual meeting of this Society was held on June 1, 1880, in the Board-room of the Infirmary. The Secretary read a report of the proceedings of the session, which proved a large advance on the success of previous years. After votes of thanks to the retiring President and Treasurer, Dr. Tibbits and Dr. Whalley, the following gentlemen were elected as officers for the succeeding year:—*President:* Dr. A. H. Rabagliati. *Treasurer:* Mr. T. C. Denby. *Secretary:* Dr. Goyder. *Committee:* Drs. Tibbits, Dunlop, Craig, and Mr. H. Meade. *Pathologists:* Messrs. J. Appleyard, M.B., and Mr. Wilmot. *Auditors:* Dr. Dunlop and Mr. T. C. Hirst.

MEDICAL NEWS.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At the usual monthly examinations for the licences of the College, held on Monday, Tuesday, Wednesday, and Thursday, June 7, 8, 9, and 10, the following candidates were successful:—

For the licence to practise Medicine—

Digan, Matthew, M.R.C.S. Eng., London.
Digby, George, Dublin.
Foggo, Isabella M. F. J., London.
Grant, Jane Russell, London.
Harper, Arthur Robert, Dublin.
Johnston, James Alfred, Dublin.
Lentaigne, Henry W., Dublin.
McArdle, John, Dublin.
Morris, Sydney Pedler, London.
O'Dwyer, James, Dublin.
Owgan, Francis Alleyn, London.
Tweedy, H. J. C., M.D. Univ. Dub., Dublin.
Vickery, Alice, London.
Warnock, John, Dublin.
Woodhouse, Stewart, M.D. Univ. Dub., Dublin.

For the licence to practise Midwifery—

Digan, Matthew.
Digby, George.
Foggo, Isabella Margaret F. J.
Grant, Jane Russell.
Harper, Arthur Robert.
Harris, Hugh, Dublin.
Johnston, James Alfred.
Lentaigne, Henry Westeura.
McArdle, John.
Morris, Sydney Pedler.
O'Dwyer, James.
Vickery, Alice.
Warnock, John.

The following Licentiates have been admitted to the Membership of the College:—

Boulton, Edward Joseph, 1859, Surgeon-Major A.M.D.
Browne, David John, 1869, Londonderry.
Croker, Arthur, 1865, London.
Elmes, William H., Surgeon R.N., 1869, Queenstown.
Hartigan, William, 1876, Hong-Kong.
Jex-Blake, Sophia, 1877, Edinburgh.
Murray, James, 1874, London.
O'Brien, Richard Alfred, 1864, Hong-kong.
Scott, James Hamilton, 1867, Camberley.
Walter, William, 1874, Manchester.
Wood, John, Surgeon R.N., 1868, Yokohama.
Wrightson, Edward Willington, 1872, Halesworth.
Yeo, Robert Frederick, 1875, Surgeon R.N.

APOTHECARIES' HALL, LONDON.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, June 10:—

Branthwaite, Robert Welsh, Westbury House, Willesden, N.W.
Pritchard, Owen, 100, Commercial-road, E.
Vaisey, Thomas Frederick, Canterbury Hospital.

The following gentlemen also on the same day passed their Primary Professional Examination:—

Daucey, Horace Michael, University College Hospital.
O'Connor, Thomas, St. Thomas's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to all new Appointments that take place.

BAKER, JAMES BARRINGTON.—Assistant Surgical Officer to Charing-cross Hospital, *vice* William Jenner Clarke, L.S.A.

CLARKE, WILLIAM JENNER, L.S.A.—Assistant Medical Officer to Charing-cross Hospital, *vice* A. Hooley, L.S.A.

CULLING, JOHN CHISLET, M.R.C.S., L.S.A.—Resident Medical Officer to Charing-cross Hospital, *vice* Charles Grinling Bunn, L.S.A.

FOWLER, J. K., B.A., M.B., L.R.C.P., M.R.C.S.—Assistant-Physician to the Hospital for Consumption and Diseases of the Chest, Brompton.

GORDON, Dr.—Surgeon to H.M.'s Prison, Holloway, *vice* Thomas Graham, M.R.C.S., L.S.A., resigned.

WALKER, WILLIAM FREDERIC, L.S.A.—Resident Obstetrical Officer to Charing-cross Hospital, *vice* John Chislet Culling, M.R.C.S., L.S.A.

WATSON, FRANK SPENCER, M.R.C.S., L.S.A.—Resident Surgical Officer to Charing-cross Hospital, *vice* James Turton, L.S.A.

BIRTHS.

BALL.—On June 12, at Albemarle Villa, Staines-road, Hounslow, the wife of William Montague Ball, M.B., of a daughter.

GRAY.—On May 9, at Cinnamara, Jorehaut, Assam, the wife of Edward Gray, M.B., C.M., of a son.

LEADER.—On June 8, at Cahir, the wife of John Leader, L.R.C.P., A.M.D., of Keale, co. Cork, of a daughter.

MAGINNISS.—On June 14, at 11, St. Mark's-square, Regent's-park, Mrs. Maginniss, widow of the late R. M. Maginniss, M.D., of Camden-road, of a daughter.

MUMFORD.—On June 13, at 1, Bartlett's-passage, Holborn-circus, the wife of William Lugar Mumford, M.D., prematurely, of a son.

MARRIAGES.

ADAMS—ENGLAND.—On June 9, in London, S. Hoppus Adams, M.D., of Bedford, to Caroline, youngest daughter of the Rev. John England, of Finsbury-park, London.

BILLINGHURST—WILKINSON.—On June 12, at Lewisham, William Bennett, second son of Henry Billinghurst, M.D., of Dartmouth-row, Blackheath, to Mary Anne, younger daughter of the late Rev. Alfred Wilkinson, M.A., of Poole, Dorset, and Rural Dean.

DAVIES—BATCHELOR.—On June 8, at Cheltenham, William H. Davies, M.R.C.S., L.R.C.P., L.S.A., eldest son of W. J. Davies, Esq., J.P., F.R.C.S., of Penner House, near Newport, Mon., to Amelia, eldest daughter of the late T. B. Batchelor, Esq., of Newport, Mon.

PETERSON—GOTTSCHALK.—On May 27, at Philadelphia, U.S.A., R. E. Peterson, M.D., to Clara, second daughter of the late Edward Gottschalk, Esq., of London and New Orleans.

RYAN—PARKER.—On June 9, at Hampstead, Charles Edward Ryan, M.D., of Emly, Tipperary, to Mary Vincent, eldest daughter of Henry Watson Parker, Esq., of Heath Hurst, Hampstead.

STEUART—SMITH.—On June 9, at Edinburgh, William G. Steuart, Esq., to Edith, youngest daughter of George H. Smith, M.D., of 80, Great King-street.

STEVENSON—EATON.—On May 12, at Cape Town, South Africa, Edmund Sinclair Stevenson, L.M., M.R.C.S., L.R.C.P., to Anne Emily D'Urban, eldest daughter of T. J. Eaton, Esq., of Drooge Vlei, Malmesbury.

DEATHS.

ANDERSON, ALEXANDER, L.R.C.P., Staff-Surgeon, at 10, South Mansion House-road, Edinburgh, on June 11.

BUSIGNY, CHARLES EDWARD, M.R.C.S., L.M., L.S.A., at Shaw-street, Worcester, on June 11, in his 50th year.

DICKSON, CECILIA CLEGG, wife of Robert Dickson, L.R.C.S., at Dalhousie Villa, Carnoustie, N.B., on June 14, aged 40.

EVANS, THOMAS, M.D., F.R.C.P., Consulting-Physician at the Gloucester Infirmary and the Gloucester Dispensary, at Mynd House, Gloucester, on June 3, aged 75.

FRASER, RODERICK, M.D., late of Florence, at 9, Greenhill-place, Morningside, Edinburgh, on June 11, in his 65th year.

JONES, ROBERT WYNNE, M.R.C.S., at Beaumaris, on June 12, in his 72nd year.

STORER, JANE, wife of Charles Storer, M.D., at Lowdham Grange, Nottingham, on June 12, aged 70.

WHIDBORNE, GEORGE HERBERT, M.R.C.S., at Topsham, Devon, on June 10, aged 37.

WILLIAMS, JAMES, M.D., late of Malvern, and formerly of Aspley Guise, Bedfordshire, at Croydon, on June 9, aged 60.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BIRMINGHAM GENERAL DISPENSARY (ASTON BRANCH).—Resident Surgeon. Candidates must be registered and possess a medical and surgical qualification. Applications, accompanied by certificates of registration and original testimonials, to be sent to Alexander Forrest, Esq., Secretary, on or before June 21.

BIRMINGHAM GENERAL DISPENSARY, UNION-STREET.—Resident Surgeon. Candidates must be registered and possess a medical and surgical qualification. Applications, accompanied by certificates of registration and original testimonials, to be sent to Alexander Forrest, Secretary, on or before June 21.

GREAT NORTHERN HOSPITAL, CALEDONIAN-ROAD, LONDON, N.—Physician for Out-patients. (*For particulars see Advertisement.*)

HOSPITAL FOR WOMEN, SOHO-SQUARE, W.—House-Physician. Candidates must have a recognised medical or surgical qualification. (*For further particulars see Advertisement.*)

LIVERPOOL DISPENSARIES.—Assistant Resident House-Surgeon. Candidates must be duly qualified and unmarried. Applications, stating age, with testimonials and registration certificate, to be sent to the Secretary, Leith Offices, 34, Moorfields, Liverpool, not later than June 21.

MANCHESTER ROYAL INFIRMARY, DISPENSARY, AND LUNATIC HOSPITAL.—Honorary Assistant-Surgeon. (*For particulars see Advertisement.*)

MIDDLESEX HOSPITAL, W.—Aural Surgeon. Candidates must be Fellows of the Royal College of Surgeons of England. Applications, with testimonials, to be sent to F. C. Melhado, Esq., Acting Secretary, by 1 p.m., June 19.

NEWCASTLE-UPON-TYNE INFIRMARY.—Junior House-Surgeon. Candidates must be registered medical practitioners, and unmarried. Applications with testimonials, to be sent to the Chairman of the House Committee on or before June 23. Further particulars may be obtained from the Secretary, at the Infirmary, Newcastle.

ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY, WIGAN.—Senior House-Surgeon. The successful candidate must undertake not to practise in the Wigan Union for a period of three years. Applications, with recent testimonials, to be sent to Will. Taberner, Esq., Secretary, before June 30.

SMALL-POX AND VACCINATION HOSPITAL, HIGHGATE-HILL, UPPER HOLLOWAY.—Resident Surgeon. Candidates must be members of the Royal College of Surgeons of England, and Licentiates of the London Society of Apothecaries, and unmarried. Board and residence provided by the Hospital. (*For further particulars see Advertisement.*)

WESTMINSTER GENERAL DISPENSARY, GERRARD-STREET, SOHO.—Physician. Candidates must be Doctors or Bachelors of Medicine and registered practitioners. Diplomas or testimonials to be sent to John Potter, Esq., Secretary, on or before June 21.

WHITEHAVEN AND WEST CUMBERLAND INFIRMARY AND FEVER HOSPITAL.—House-Surgeon. Applications, with testimonials (prepaid), to be sent to Mr. James Knight, Secretary, before June 25.

WOLVERHAMPON AND STAFFORDSHIRE GENERAL HOSPITAL, WOLVERHAMPTON.—Surgeon. Candidates must be Fellows or Members of the Royal College of Surgeons in London, Edinburgh, or Dublin. Applications, with testimonials, to be sent to the Secretary, on or before June 28.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Cranbrook Union.—Mr. L. M. Earle has resigned the Hawkhurst District: area 6472; population 2949; salary £55 per annum.

Haverfordwest Union.—Mr. John Howell has resigned the St. David's District: population 6685; salary £71 per annum.

Metropolitan Asylum District.—Dr. M. D. Makuna has resigned the office of Medical Superintendent of the Fulham Small-pox Hospital.

APPOINTMENTS.

Birmingham Parish.—Hugh W. Thomas, M.R.C.S. Eng., L.S.A., to the Cottage Home School.

Central London Sick Asylum District.—John Hopkins, M.R.C.S. Eng., L.S.A., to the Cleveland-street Asylum.

Carlisle Union.—Andrew G. Paterson, L.R.C.S. Edin., L.R.C.P. Edin., to the Caldewgate District.

Derby.—Otto Hehner, F.C.S., as Analyst for the Borough.

Hailsham Union.—Arthur K. Barnes, M.B. and L.R.C.P. Edin., M.R.C.S. Eng., to the Fourth District.

Liverpool Parish.—Edward Hanly, M.D. and M.C. Queen's Univ. Ire., as Resident Assistant Medical Officer at the Brownlow Hill Workhouse.

Nantwich Union.—William R. Tough, M.B. and M.C. Univ. Aber., to the Audlem District.

Spilsby Union.—George H. Grimoldby, M.R.C.S. Eng., L.R.C.P. Edin., to the Stickney District.

Thirsk Union.—Henry Longford, L.K.&Q.C.P. Ire., L.R.C.S. Ire., to the Knayton District.

St. Andrews Graduates' Association.—The anniversary session and dinner of this Association were held at the Greyhound Hotel, Hampton Court, on Saturday last, under the presidency of Dr. Fenton, of Sunbury. The Council's report congratulated the members on the election of Dr. Richardson as Assessor of the General Council, and urged upon all St. Andrews graduates to close up their ranks in the face of the ominous hints which have been thrown out of coming attempts to disfranchise the Scotch Universities.

Deaths from Chloroform.—Within a few weeks two deaths from the use of chloroform have occurred at Chicago. 1. One was a young man undergoing an exploratory operation for necrosis at the Eclectic Medical College. Only a little chloroform was used, and that with caution. No heart disease was found post-mortem, but the brain was thought to be softer than natural. 2. The other case was a weakly man, under middle age, with organic heart disease, who had been an invalid for several years. He received a crushing injury to the thumb, and was taken to a drug-store kept by a physician, to have it dressed. Amputation being necessary, ether was first tried, but anæsthesia not being promptly induced, chloroform was substituted. After a few inspirations the patient died, the quantity of chloroform used having been small. The heart was found fatty and affected by valvular disease.—*New York Medical Record*, May 22.

Lime-water Spray in Scarlatina Sore Throat.—Dr. Alonzo Clark states that, of the various applications which he has tried, he prefers frequent gargling with cold water; but when the children are too young to gargle, and there is membranous production in the throat, he has found great advantage in using the spray of ordinary lime-water produced by an ordinary spray-producer. The child's mouth is held open and the spray is thrown in as he takes an inspiration, so as to shower it down on the fauces. In a case of diphtheria the persevering use of this spray was also found very useful in detaching the membrane. "This lime-water thrown on the forming membrane, I believe to be the most efficacious thing you can have. It does not apparently disintegrate the membrane, but it seems to produce a breaking-up of its attachments to the living tissue."—*New York Med. Record*, May 15.

Berlin Registration Returns for 1879.—With a population of 1,065,440 there were born in Berlin in 1879 44,206 (22,651 male and 21,555 female) living children, 5793 (2995 male and 2798 female) being illegitimate; and 1848 (1057 male and 791 female) dead children—390 (218 male and 179 female) being illegitimate. The number of deaths, not including the born-dead, was 29,541 (15,916 males and 13,625 females). Under the first year of age there died 12,654 children (9956 legitimate and 2698 illegitimate); between one and five years there were 4668 deaths (4328 legitimate and 340 illegitimate children); between five and twenty years there were 1480 deaths; between twenty and forty 3999 deaths; between forty and sixty 3544 deaths; and between sixty and eighty and upwards 3196 deaths. There were 104 deaths from measles, 463 from scarlatina, 8 from small-pox, 120 from erysipelas, 1146 from diphtheria, 209 from croup, 59 from pyæmia, 200 from puerperal fever, 296 from typhoid fever, 114 from typhus fever, 80 from dysentery, 2 from intermittent fever, 83 from syphilis, 391 from pertussis, 35 from rheumatism, 858 from apoplexy, 3485 from phthisis, 1632 from pneumonia, 842 from other affections of the respiratory organs, 203 from affections of the stomach and intestines, and 3124 from cholera. There were 308 suicides.—*Veroff. Deutsch. Gesundheits.*, June 7.

Scarlatina in New York.—In a lecture on scarlatina, Dr. Alonzo Clark stated (*New York Med. Record*, May 15) that it appears, from the bills of mortality which have been regularly kept since 1804, that scarlatina is a disease which has greatly increased in frequency in New York, as compared with the increase of population. Between 1804 and 1828 the deaths only amounted to 111; but then a sudden increase took place, so that in 1829 alone 188 deaths occurred—that is, a number greatly exceeding the whole number for the preceding twenty-five years. From that time it has continued to increase, though not always progressively; and in 1877 there were 815 deaths from the disease. Dr. Clark's attention was more particularly called to this fact many years ago by being applied to by Dr. Peto, the Physician of the Asylum for the Deaf and Dumb, to explain the occurrence in 1829 of a great increase of admissions for deafness caused by the sore throat of scarlatina.

The "Salsbury Method of Diet" in Consumption.—Dr. Norton, of Cleveland, relates his own case in the *Virginia Medical Monthly* for October, stating that the subject of consumption he had tried every means of cure, regular and irregular, and had become reduced to a deplorable condition, when he was cured by the Salsbury method of diet. He also furnishes a number of illustrative cases. The "method of cure" is as follows:—The patient is restricted to a meat diet, one mouthful of bread or boiled rice only being allowed to six of meat; a cup of tea or coffee without sugar or milk being also permitted. Not less than an hour before each meal, and at bed-time, the patient should drink a half-pint of hot water. This is to wash out the stomach and bowels and remove the unhealthy ferments that may be in them. It is an excellent appetiser, and does more good than medicines. On retiring he takes a hot bath containing a tablespoonful of ammonia, and finishes with brisk rubbing. The meat diet may not be very pleasant at first, but in a few days the patient becomes accustomed to it, and rather relishes his new mode of life. It is well to have the supervision of a competent physician to direct the amount of exercise, recreation, etc., and to strengthen weak resolutions in those who have not perseverance to continue the treatment alone.—*Canada Med. Jour.*, April.

The Population of Belgium.—On December 31, 1878, the population of the kingdom amounted to 5,476,939, or 186 to the square kilometre, varying from 558 inhabitants per square kilo. in the arrondissement of Brussels to 36 in that of Neufchâteau. Between 1840 and 1878 the population increased by 1,403,777 inhabitants, *i.e.*, by 34 per cent., the provinces in which the increase was most considerable being Liége (59 per cent.), Brabant (58), Antwerp (51), and Hainault (47). In Luxembourg it was only 18 per cent., and in West Flanders 7 per cent. The increase has taken place especially in the "administrative arrondissements," as Charleroi (156 per cent.), Brussels (90), Antwerp (81), Liége (80), and Vervier (60). It has scarcely taken place in Roulers, Dixmude, and Courtrai; while a diminution of population has taken place in Audenarde (11 per cent.), Thielt (7), and Ath (2). There has been a constant increase of births over deaths in all the provinces. This was 33 per cent. in 1840, 28 per cent. only in 1865, and rose to 47 per cent. in 1878. The provinces in which this excess attained its greatest height in 1878 were Antwerp (63 per cent.), Namur (56), Brabant (54), and Liége (53). Of 100 persons dying in 1878, there were 52 males and 48 females. The number of inhabitants for each death was 39 in 1840, and had risen to 46 in 1878. The number of deaths to 100 births fell from 75 in 1840 to 72 in 1870 and 68 in 1878.—*Union Méd.*, June 5.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

A Fellow.—As there are only four vacancies, though there are nine candidates, you would have lost the right of voting at the election of Fellows into the Council of the College of Surgeons if you had nominated more than four candidates.

F.R.C.S., Netley.—The official notice, of which you will receive a copy, appears in the London *Gazette* of this day. The candidates are given in order of seniority:—1. Mr. W. Cadge, nominated by Messrs. W. Bowman, J. F. West, H. Thompson, T. Smith, T. W. Crosse, and J. T. Clover. 2. Mr. W. Adams, by Messrs. W. Mac Cormac, G. Critchett, F. Jordan, H. Smith, W. J. Coulson, and J. F. West. 3. Mr. J. Lister, by Messrs. H. Smith, J. Couper, W. Mac Cormac, W. B. Page, T. Smith, and C. Heath. 4. Mr. T. Bryant, by Messrs. E. Cock, H. Thompson, W. Mac Cormac, J. Couper, H. Morris, and W. D. Husband; 5. Mr. Sydney Jones, by Messrs. J. Simon, W. Mac Cormac, C. Heath, E. Morris, J. Croft, and F. Mason. 6. Mr. J. W. Hulke, by Messrs. J. Wiblin, G. Lawson, H. Morris, W. M. Baker, A. E. Durham, and Sir Joseph Fayrer. 7. Mr. T. Smith, by Messrs. J. Lister, A. Willett, C. Heath, A. E. Durham, W. Cadge, and J. Croft. 8. Mr. M. B. Hill, by Messrs. F. Le G. Clark, A. E. Durham, G. Critchett, C. Heath, T. Smith, and C. H. Mariott. 9. Mr. R. Harrison, by Messrs. A. Pemberton, W. M. Banks, H. Harris, T. R. Jessop. R. Parker, and C. H. Higgens. The election will take place on Thursday, the 1st prox., at two o'clock.

Dr. M., Norwich.—The late Mr. William Webber was never admitted a Fellow of the College.

Dr. A. S. Taylor.—Messrs. Barraud published an admirable portrait of this gentleman. He also is represented in their large picture "The Leaders in Medicine and Surgery, 1876," the value of which is being quickly enhanced as one after the other of those whose likenesses it contains are taken from among us.

The Sea-Water in London Experiment.—With the view of dispelling any doubt of the purity of the sea-water sent from Lowestoft to London by the Great Eastern Railway Company, we may state, on the authority of the Secretary of the Company, that the water is taken from a point outside the harbour, and was selected by the Company's engineer as being the best for obtaining a pure supply. The tin cans now in use (probably not the best vessels for the purpose) are likely to be superseded by other more suitable vessels. The Company is making experiments with that object in view.

The London Water-Supply Select Committee.—It is noteworthy, and we think to be regretted, that of the few medical members in the House of Commons, not one has been appointed on the Select Committee on the Metropolitan Water-Supply. Of these medical gentlemen, several are well-known authorities on the question of the water-supply.

Dover.—The Training School for Nurses established by the "Nightingale Fund," at St. Thomas's Hospital, has been in working for twenty years. It was opened in the old Hospital in the Borough in June, 1860. To the end of last year, 565 candidates had been admitted, and 362 pupil or probationary nurses had left the school as certified nurses after completing a year's training.

A Pension.—The Court of Aldermen have granted Mr. Thomas Graham, late Surgeon to the Holloway Prison, a retiring pension of £166 2s. a year, in addition to £8 14s. payable yearly out of moneys voted by Parliament.

L. M. P., Clapham.—Dr. Johnson's remark descriptive of the profession is in the *Rambler*, No. 19, thus:—"He (Polyphilus) determined to quit physick for a profession (the law) in which he found it would be so easy to excel, and which promised higher honours and larger profits, without melancholy, attendance upon misery, mean submission to peevishness, and continual interruption of rest and pleasure."

Increased Consumption of Intoxicating Drinks at the Cape.—The consumption of spirits in this colony is officially reported to be increasing in a greater ratio than the increase of population. In 1865 the rate per head was seven-eighths of a gallon; in 1878 it was one and one-fourth. The consumption of wine was exactly six gallons and a quarter per head at both periods. The registered number of distilleries up to March 31, 1879, was 2742. Of these the great majority are on the wine farms, and in many instances do not exceed, in capacity, a good-sized English washhouse boiler or copper. There are a few, perhaps not a dozen altogether, distilling companies in South Africa. The brewing of good beer has to be introduced at places beyond Cape Town and Port Elizabeth. Most other places use the imported brands. German brands have lately been freely introduced. The total quantity of all kinds entered at the Customs at the Port of Elizabeth alone was 401,346 gallons in 1879, out of 809,083 gallons taken by the colony. In 1878 the full import for all ports was 730,779 gallons, showing for the past year an increase.

Meteorologist, Wales.—The London Meteorological Office began to issue statistics of the weather of the British Islands in 1878 for sanitary and agricultural purposes.

Hay Fever.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—As many of your readers are most likely suffering from this troublesome complaint, perhaps you will find space for these few lines. For many years I have been troubled with hay fever, and I have not heard of any remedy until recently. A week or two ago a friend of mine advised me to inhale brandy-and-water and bathe my eyes with it. Those who will adopt this simple remedy will suffer no more from hay fever.

Conservative Club, June 16. I am, &c., A. B.

The coming Census, 1881.—A correspondent of the *York Herald*, in answering the question as to the cost of the coming census, says:—"In 1841 it was £86,728; in 1851, £93,132; in 1861, £95,719; in 1871, £120,000. Those who have studied the figures aver that in 1881 it will cost nearly £140,000. This would be an average of nearly a penny per head of the estimated population."

An Old Apothecary.—It was a very common practice, as you may judge from the following circular:—"J. and E. Beswick, bleeders with leeches, top of the coachyard, second door through the large gateway, three doors below the Saracen's Head Inn, Bull-street, Birmingham. E. B. respectfully informs the inhabitants of Birmingham and its vicinity that for the better accommodation of her friends she has taken a house at the top of the coachyard, Bull-street, etc. Patients attended at their own houses in any part of the town at 3d. per leech, and at E. B.'s house at 2d. per leech, where a room will be set apart for the use and comfort of patients. N.B.—J. B. is regularly supplied with fresh-caught human leeches every week.—Leeches sold."

Dr. Harris.—The following is, we believe, an accurate list of the secretaries of the Fellows' festival:—1847, Mr. Charles Hawkins—three years; 1850, Mr. W. White Cooper—two years; 1852, Mr. J. Newton Tomkins—one year; 1853, Mr. Wm. Adams—ten years; 1862, Mr. Callender—two years; 1864, M. E. C. Hulme—five years; 1869, Mr. T. Carr Jackson—five years; 1874, Mr. Allingham—four years; and 1878, Mr. B. T. Lowne—who, we understand, will act for the last time in July next.

Cremation.—It is by no means clear that cremation is lawful in this country. Even if it be, the practice cannot be legally carried on where it can be shown that it is a nuisance and injurious to the health of people residing in the neighbourhood.

Scaffolding Dangers.—The frequency of fatalities from the erection of scaffolding by unskilled hands undoubtedly calls for legislative precautions and provisions against the existing irresponsibility as to the stability and adequate safety of these erections. Mr. Broadhurst, the member for Stoke-upon-Trent, in his maiden speech to the House of Commons, during the discussion of the "Employers' Liability Bill," gave his experience as a working stonemason, who had worked high up on a scaffold, of the dangers to which workmen were at present subjected. A recent instance of the risks that are incurred by skilled workmen is the terrible accident which occurred last week at the works of the Swansea Furnace Company. The scaffolding and stage gave way, and two men died shortly afterwards from injuries received, whilst several others were sent into the hospital.

W. Picciotto G.—No; the cause of the death of Victor Emmanuel, the King of Italy, was from a brief, but severe, attack of fever, caught at his hunting place of San Rossore, and complicated by pleurisy.

A Lady.—The society of abstainers organised under the name of the "Blue Ribbon Band" by the Marchioness of Ailsa last year, now numbers between three and four hundred members.

A Denial.—Dr. James Neal, Medical Officer of Health, Sandown, Isle of Wight, writes and contradicts the rumour that there is "a great deal of sickness at the Isle of Wight," and that "several cases of typhoid fever" have occurred, "one fatal case at Sandown." He gives an unqualified denial to such report as regards Sandown, and adds, "the town is in its usual healthy condition; there has been no case of typhoid fever."

Sea-Bathing.—The Scotch Meteorological Society have published the result of a series of observations on the temperature of the sea. The observations were made every day during a period of four years and nine months. The result is that the changes of atmospheric temperature affect the sea but slowly. The mean temperature of the sea is found to be warmer than that of the atmosphere in seven out of the twelve months. January is the coldest month, but the sea-water is coldest in March; July is the hottest month, but the sea-water reaches its maximum warmth towards the end of August. From that time the sea becomes warmer than the air, and cools so much slower than the weather, that in November the average warmth of the water is six degrees, and in December seven degrees, higher than that of the atmosphere. From the end of March, however, and for the next five months, the air is warmer than the water. These observations were made at Peterhead. It would appear, therefore, that sea-bathing may be continued late in the autumn, that it should be begun late, and may, without risk, apparently, end late.

Pauper Nurses and Stimulants.—The Board of Guardians of Bristol have decided, with reference to the use of intoxicating liquors in the workhouse, that stimulants given to paupers acting as nurses should only be supplied at meal-times, and that the quantities ordered for the sick should be under the supervision of the paid officials.

COMMUNICATIONS have been received from—
Dr. Russell, Birmingham; Mr. Shirley Murphy, London; Mr. Lawson Tait, Birmingham; Mr. W. F. Teevan, London; Mr. Thos. Smith, London; Dr. Handfield Jones, London; The Registrar of the Apothecaries' Hall, London; Messrs. Emil Oppert and Co., London; The Manager of the Alexandra Palace; Mr. R. W. Parker, London: Surgeon-General Irving, Tunbridge Wells; Mr. J. Chatto, London; Dr. Alex. Marsden, London; Dr. J. W. Gillespie, London; Dr. Sedgwick, London; The Honorary Secretary of the Quekett Microscopical Club; The Registrar-General of Edinburgh; The Secretary of the Society of Arts, etc.; Dr. J. W. Moore, Dublin; The Secretary of the Anthropological Institute of Great Britain and Ireland: The Secretary of the Medico-Chirurgical Society, Bradford; The Secretary of the Home Hospital Association, London.

BOOKS, ETC., RECEIVED—
Twenty-eighth Report of the Derbyshire County Lunatic Asylum—Amputations, par le Dr. A. Verneuil—Twenty-fourth and Twenty-seventh Annual Reports of the County and City of Worcester Pauper Lunatic Asylum—Food and Feeding, by Sir Henry Thompson, F.R.C.S.—Army Medical Department Report for the Year 1878—Royat, by Dr. G. H. Brandt—A Manual of Diseases of the Throat and Nose, by Morell Mackenzie, M.D.—Report of the Metropolitan Board of Works for 1879—The Hysterical Element in Orthopædic Surgery, by Newton M. Shaffer, M.D.—Annual Report of the Queen Charlotte's Lying-in Hospital for 1879—A Note on Pepsin, by Edwd. R. Squibb, M.D.—On Fluid Extracts as proposed for the coming Pharmacopœia (reprint from the "Therapeutic Gazette," April 15, 1880)—Ophthalmic and Otic Contributions, by Daniel B. St. John Roosa, M.D.—Splenic Fever, Quarter-Evil, and Allied Diseases, by W. S. Greenfield, M.D., F.R.C.P.—Thirty-ninth Annual Report of the Registrar-General of Births, Deaths, and Marriages—Report of the Health of Liverpool during the year 1879, by J. Stopford Taylor, M.D.—Report on the Sanitary Condition of the Cambridge Improvement Act District for 1879, by Bushell Anningson, M.D., M.A.—The Art of Washing, by A. A. Strunge Buson—Deafness, Giddiness, and Noises in the Head, by Dr. Woakes—Forty-first Annual Report of the Registrar-General of Births, Deaths, and Marriages in England.

PERIODICALS AND NEWSPAPERS RECEIVED—
Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Centralblatt für die Medicinischen Wissenschaften—Nature—Revue Médicale—Occasional Notes—Gazette Hebdomadaire—Pioneer, May 11, Allahabad—Bradford Observer, May 25—El Jurado Médico-Farmaceutico—Boston Journal of Chemistry—New York Medical Journal—Index Medicus—Archives of Medicine—National Board of Health Bulletin, Washington—Globe, June 12—Monthly Review of Dental Surgery—El Siglo Médico—Canada Lancet—Revue d'Hygiène.

APPOINTMENTS FOR THE WEEK.

June 19. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

21. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Royal College of Surgeons of England, 4 p.m. Prof. Jonathan Hutchinson, F.R.C.S., "On some of the Surgical Bearings of Gout and Rheumatism."

22. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Anthropological Institute, 8 p.m. Mr. Peter Bemridge, "On the Aborigines of Victoria." Prof. W. H. Flower, F.R.S., "On a Collection of Crania from the Fiji Islands." Rev. Lorimer Fison, "On Land Tenure in Fiji."

23. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Lister), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.; National Orthopædic, Great Portland-street, 10 a.m.

Royal College of Surgeons of England, 4 p.m. Prof. Jonathan Hutchinson, F.R.C.S., "On the Etiology of True Leprosy."

24. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

25. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

Royal College of Surgeons of England, 4 p.m. Prof. Jonathan Hutchinson, F.R.C.S., "On the Etiology of True Leprosy."

Quekett Microscopical Club (University College), 8 p.m. Mr. W. H. Gilburt, "On the Histology of Pitcher Plants." Dr. Patrick Manson (communicated by the President), "Further Observations on *Filariæ*."

VITAL STATISTICS OF LONDON.

Week ending Saturday, June 12, 1880.

BIRTHS.

Births of Boys, 1406; Girls, 1330; Total, 2736.
Corrected average in the 10 years 1870-79, 2549·9.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	675	619	1294
Average of the ten years 1870-79, corrected to increased population	743·3	680·9	1424·2
Deaths of people aged 80 and upwards ...	...	...	40

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa
West	561359	1	5	4	2	6	...	4	1	3
North ...	751729	4	3	15	1	17	...	2	...	3
Central ...	334369	...	2	3	3	3	...	...	1	...
East	639111	1	7	19	...	9	...	...	...	7
South	967692	4	15	24	2	13	...	5	...	3
Total	3254260	10	32	65	8	48	...	11	2	16

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·662 in.
Mean temperature	53·9°
Highest point of thermometer	68·8°
Lowest point of thermometer	41·0°
Mean dew-point temperature	47·3°
General direction of wind	S.W.
Whole amount of rain in the week	0·38 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, June 12, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1880.*	Persons to an Acre. (1880.)	Births Registered during the week ending June 12.	Deaths Registered during the week ending June 12.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Centimetres.
London	3664149	48·6	2736	1294	68·8	41·0	53·9	12·17	0·38	0·97
Brighton	107321	45·6	71	27	65·0	44·0	53·0	11·67	0·22	0·56
Portsmouth ...	134224	29·9	93	45	...	...	...	...	...	...
Norwich	85827	11·5	61	34	63·0	43·0	52·0	11·11	0·85	2·16
Plymouth	74993	53·8	38	28	68·2	40·3	53·1	11·73	0·12	0·30
Bristol	213536	48·0	130	99	67·1	41·2	51·8	11·01	0·43	1·09
Wolverhampton ...	75970	22·4	60	24	64·9	35·8	48·6	9·23	0·38	0·97
Birmingham ...	394738	47·0	350	113	69·0	39·5	51·7	10·95	0·42	1·07
Leicester	129912	40·6	94	38	71·0	38·8	52·0	11·11	0·69	1·75
Nottingham ...	173627	17·4	120	75	71·9	36·0	53·2	11·78	0·99	2·51
Liverpool	544056	104·4	414	279	...	...	...	...	...	...
Manchester ...	363130	84·6	259	161	...	...	...	...	...	...
Salford	185786	35·9	155	70	...	...	...	...	...	...
Oldham	115413	24·7	75	43	...	...	...	...	...	...
Bradford	197196	27·3	142	65	62·0	40·0	49·7	9·83	0·35	0·89
Leeds	318929	14·8	203	109	63·0	40·0	50·3	10·17	0·48	1·22
Sheffield	304938	15·5	235	106	69·0	39·5	50·5	10·28	0·35	0·89
Hull	149627	41·2	135	52	66·0	38·0	51·0	10·56	0·60	1·52
Sunderland ...	116730	42·2	90	51	68·0	43·0	51·9	11·06	0·41	1·04
Newcastle-on-Tyne	149366	27·8	115	52	...	...	...	...	...	...
Edinburgh	229839	54·8	174	104	69·5	38·2	51·7	10·95	0·57	1·45
Glasgow	589598	97·7	376	290	67·5	39·3	52·6	11·45	0·31	0·79
Dublin	314666	31·3	184	256	63·8	34·0	49·2	9·55	1·09	2·75
Total of 23 Towns in United Kingdom	8633571	39·2	6310	3415	71·9	34·0	51·5	10·84	0·51	1·30

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·66 in. The lowest reading was 29·42 in. on Monday at noon, and the highest 29·85 in. on Saturday at noon.

* The figures for the English and Scottish towns (except for Nottingham, Salford, and Oldham) are the numbers enumerated in April, 1871, raised to the middle of 1880 by the addition of nine years and a quarter's increase, calculated at the rate which prevailed between 1861 and 1871. Revised estimates have been adopted for Nottingham, Salford, and Oldham, based upon special returns of inhabited houses existing within those boroughs; the population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE ON VAGINITIS.

By J. MATTHEWS DUNCAN, M.D., LL.D.,
Physician-Accoucheur and Lecturer on Midwifery at St. Bartholomew's Hospital.

My lecture to-day is upon vaginitis, a disease which is so copiously illustrated by cases in "Martha" that, although it cannot be expected to strike you, it strikes me very forcibly that it is greatly neglected in medical practice and in medical literature. This arises from two circumstances: it is often chronic and slight; and it often forms a part of a more extensive disease, of which other parts are much more urgent and attract the whole attention of the observer to themselves. If a woman, for instance, has chronic vaginitis and ovaritis, the case will probably be called ovaritis, and there will be a risk of the vaginitis being neglected. If a woman has acute vaginitis and cystitis—which latter is one of the most painful and urgent of diseases,—it is likely that the vaginitis will be neglected. The frequency of this disease gives it great importance.

Before I consider the parts of the subject which are to form the chief topic of my lecture to-day, I must get a few statements out of the way. Diphtheritic vaginitis is a rare disease: I have seen it. Erysipelatous vaginitis is a rare disease; and there is a peculiar form of it which is rarer—a diffuse inflammation of the external cellular coat, causing swelling which almost occludes the whole length of the passage; and when this ends in suppuration, it sometimes so dissects out the tube of the vagina as to deserve the name of para-vaginitis dissecans. Lately I have seen a case of vaginitis with similar inflammation of the cervix uteri, where the disease consists of rounded sloughing phagedænic ulcerations, of one or two lines broad, for whose origin no satisfactory syphilitic account could be given; the ulcers were on the laquear vaginæ and on the cervix. Then an ulcerous vaginitis ending in adhesions is described; and I have seen a pustular vaginitis.

Besides these differing kinds there are varieties of vaginitis as where the disease attacks only parts of the passage, as the laquear, in which case it is very frequently associated with inflammation of the cervix uteri. It also frequently attacks the lower part alone of the vagina, and in that case it is often associated with inflammation of the pudendum. Besides, the inflammation may be of small parts, so that, when the vagina is looked at, it has a mapped, or a marbled, or a mottled appearance. I have seen also a vagina spotted like a Dalmatian dog, as if the chronic inflammation were only around the openings of numerous little mucous follicles, regularly arranged. Again, as in a case which I showed you in "Martha" last Tuesday, the inflammation may so affect the ridges of the rugæ of the vagina that they alone appear red, the sulci being pale.

Now for a great matter. Vaginitis may be a local or a constitutional disease. The characteristic acute vaginitis, gonorrhœa venerealis, or the same disease occurring after marriage, or the same disease occurring after the introduction or during the wearing of a pessary, are examples of local—purely local—disease. If the disease is severe it draws the constitution into sympathy with it, and you have a constitutional affection secondary to the local.

But a large number—indeed, I think the majority of cases—are constitutional in their origin: they exhibit an order the reverse of that which I have mentioned as characteristic of local diseases; it is the constitutional that brings on the local affection secondary to the constitutional.

In this hospital it seems natural to speak at length on the constitutional origin and treatment of local disease, of which Abernethy made so much. The subject, as he discussed it, was very imperfectly known; and indeed now our knowledge is very deficient. A great deal of the details of what has been said, and some of what I have to say, is mere arbitrary statement; but the great principles are so important that I must enter upon them at some length.

There is an inflammatory diathesis which accounts for the occurrence of local diseases, and this is occasionally well exemplified in lying-in women. Such, while well and tenderly cared for and scrupulously nursed, and after the time of septicæmia and pyæmia are far past, may have a violent attack of pleuritis or pleuro-pneumonia, for which no explanation can be discovered, and which begins and ends as a simple inflammatory disease, but not a mere local disease: it springs from a constitutional origin, and this origin we call the inflammatory diathesis for want of a more definitely intelligent name. Extraordinary examples of this I have seen; several cases, indeed, such as this:—After a week of healthy recovery, then come puerperal insanity, double pleuro-pneumonia, double nephritis with albuminous urine, and double or right and left parametritis; all beginning and ending as purely inflammatory affections, without any discoverable reference to cold or septicæmia. In the case of simple local vaginitis, as in the analogous gonorrhœa in the male, the occasional occurrence of arthritis is alleged as evidence of a constitutional affection. This arthritis I feel bound to believe in, but I have never seen it; and for that reason I shall say nothing about it.

When vaginitis occurs as the result of constitutional disease it seldom occurs alone, although it may do so. It is generally accompanied by cystitis, and sometimes by still more extensive disease. It is generally subacute, as is the cystitis which often accompanies it. Vaginitis and cystitis, each alone, or the two combined, are not rare in old women as constitutional diseases. If they occur in conjunction, the cystitis being much more painful than the allied vaginitis may alone attract the observer's attention. Besides being subacute a constitutional vaginitis is likely to be chronic: it will probably continue so long as the constitutional condition which gives rise to it persists.

What are the constitutional conditions which give rise to vaginitis? Alcoholism is the most important; the next is old age; the next is lupus, or rather the constitution accompanying lupus; and the next is diabetes, and in this case the vaginitis is generally accompanied by vulvitis.

The importance of this distinction of vaginitis into local and constitutional is seen in treatment. A local vaginitis is to be managed almost entirely by local treatment. A constitutional vaginitis will be very imperfectly and unsuccessfully treated if you pay attention only to the local treatment; whereas if you pay attention to constitutional treatment, and even omit local treatment, you will succeed. In cases of this kind striking successes in practice are often seen. You are called to a case of a drunken woman who has, as is not very rare, inflammation of the kidney, bladder, urethra, and vagina of a subacute kind, and are told by the practitioner that he has tried every medicine he can think of. His therapeutical method, in its highly diluted copiousness, reminds one of the garrulity of little knowledge. In such a case, I say, if you recognise the constitutional origin of the disease, then the line of treatment is at once indicated, and you achieve brilliant success. You make the drunkard a teetotaler, and the vaginitis disappears. An illustration, foreign to the genital organs, may be of use: There is a form of conjunctivitis which is produced by chloralism. Now, if an oculist were treating this in ignorance of its cause, what a failure he would make! He would feel that a disease usually easily cured was beating him, and he might be tempted to try something else, and again something else; whereas, if he knew the cause, he could cure it at once. *Sublata causa tollitur effectus.*

Besides that this disease may be local or constitutional, there is another very important thing to remember about it—namely, that it is frequently part of a more extensive malady.

This is true of local vaginitis, and the more extensive malady is the affection of the neighbouring organs. In cases of acute vaginitis the spreading is by continuity. A woman has venereal gonorrhœa. It is not improbable that she will have endometritis, ovaritis, perimetritis, urethritis, cystitis, and ureteritis, and perhaps nephritis. The whole disease here is local; it was begun by the poisoning of the vaginal mucous membrane. The treatment of the local disease is essential in the case, but the other diseases must be attended to, and they may persist after the cure of the original local affection.

When the disease is constitutional, the vaginitis is, as I

have already said, generally only a part of a more extensive malady. I saw a case, for instance, not very long ago, during pregnancy, and another case in an old woman above sixty, where the constitutional disease was alcoholism. Both had purulent leucorrhœa; both had urethritis, which in the old woman was so severe that you could bring out pus from the orifice of the urethra. Both had irritable bladder and albuminous urine, this secretion being in the old woman sometimes tinged by blood. In both the vaginitis was an unimportant part of the disease compared with the affection of the urinary organs; and this latter justly attracts almost the whole attention of the practitioner. In such cases the urine is of low specific gravity; opalescent, and remaining opalescent after standing; it deposits mucus with phosphates and lithates. The microscope detects pus, bladder epithelium, and epithelium of the ureters. Albumen is thrown down after boiling.

This inflammatory affection of the whole genito-urinary organs by alcoholism, and of which vaginitis is a part, is not a disease which stands alone. There is a well-described disease, for instance, which affects the same systems of organs, and them alone, in women, called genito-urinary tuberculosis, a good example of which in the post-mortem room is one of the most interesting sights I know.

You are not to suppose that vaginitis is a usual result of alcoholism. In those not pregnant and not old a more common result is ovaritis and endometritis, like those produced by fevers. But whereas the ovaritis and endometritis of fever are temporary, the same diseases of alcoholism are only temporary if the alcoholism is also temporary.

An example of another form of constitutional disease producing vaginitis I shall read to you. Here the vaginitis is connected with lupus. I shall not now give you the characteristics of the recurring vaginitis of lupus, because you will hear me read them in this report; and I ask your attention to the fact that the vaginitis was rapidly improved while the patient was under our care.

This form of vaginitis is often easily cured, but it is very liable to relapse: for I have classed it as of constitutional origin; and who will remove lupus from the constitution? The woman has myxœdema or cretinoid disease; she has lupus minimus of the orifice of the urethra and around the vaginal orifice; and she has diabetes. She came to us to be treated for vaginal discharge.

E. K., aged forty-one, married twelve years; has had two children, no miscarriage; last child born ten years ago, husband having been absent since then. Says she measured eighteen inches in girth at the waist before her last pregnancy; she now measures thirty-eight inches. Hands and feet were then small and fine. Gradually, during the last ten years, she has grown weaker and bigger. Hands, feet, face (especially lips and nose), and neighbourhood of umbilicus, have become thickened and coarse. Hands most affected, being thick, corrugated, clumsy like those of a labourer, with the nails coarse, dirty-looking, and flattened. She has lost power to a great extent in arms and legs, being unable to grasp anything firmly, and finding it tedious and difficult to thread a needle. She cannot see, hear, smell, or taste as formerly. Ophthalmoscopic examination reveals nothing abnormal in the eyes. For the last three months she has been passing large quantities of water, and has not been able to retain it above a minute after the desire to urinate was felt. The quantity now passed is about a pint at a time; it has a specific gravity of 1042, and contains much sugar. On successive days she has passed $5\frac{1}{2}$, $6\frac{1}{2}$, 8, 6, 4, $7\frac{3}{4}$ pints. The fourchette is entire; at each side, and arranged around, and external to the proper vaginal orifice, are dark-red and tender patches. The vestibule between the clitoris and urethral orifice is red and pitted. The posterior half of margin of urethral orifice presents a prominent, caruncle-like ulcer with everted edges, not extremly sensitive. The cervix uteri contains an opaque (not yellow) mucus. The vagina has a measly-looking, mottled red surface, painted over with copious thin green pus; its surface is smooth, and no rugæ are seen. She has been treated for a few days with a vaginal injection of black-wash, and already the vaginitis has nearly gone, the surface looking scarcely redder than natural—not smooth and glazed as before, but presenting rugæ, and the pus being laudable.

Epoch, or age, here produces, not different diseases of the vagina (such differences as I illustrated in my last lecture), but it produces vaginitis of different kinds. You have no vaginitis in childhood. I, at least, have never seen any except of the lower part adjoining the hymen. Then, during mature life, you have the characteristic acute vaginitis, the venereal gonorrhœa, or a like disease, which may owe its origin to perfectly pure sexual intercourse. An acute vaginitis is not to be so designated, unless it has the combination of characters necessary to entitle it to that name. You must have intense inflammation rapidly coming on after the cause has acted, coming to a climax in eight or nine days, and then rapidly fading and going away altogether, or becoming chronic; and you must have, during the height of the disease, a copious flow of laudable pus.

The vagina in this disease generally presents a red, raw-like surface, beneath which there is little œdema, the rugæ not being obliterated. It is sometimes punctated, which probably arises from the injection of papillæ, and it is often granulated from the same cause.

The vaginitis of old age is generally subacute, and a similar disease is not rare during pregnancy and in the puerperal state. Rarely does the vagina, when inspected, present the same appearance as in the acute vaginitis of youth. It is more frequently smooth, having a glazed appearance and feeling, the rugæ being obliterated and reappearing as the disease is cured; and sometimes you see areas over which the mucous surface seems to be destroyed, and these bleed radily, especially when touched. In many of these cases you are consulted not for vaginitis, but for so-called menorrhagia, which the woman supposes she is suffering from; and, as you know, this is an alarming symptom in old women.

This disease, especially in old women, leads to garrulitas vulvæ, not the garrulity of feeble-mindedness to which I have before referred. The vagina secretes air, and the woman may be extremely annoyed by passing it from the body. This is not the only explanation of passing air from the vagina, but it is the only one I at present mention; and I may remind you of the disease called vaginitis emphysematosa. In the subacute vaginitis of old women the bladder is very often simultaneously affected. The pus is generally thin and green. It is sometimes extremely copious. Although the disease may depend greatly upon the permanent constitutional influence of senescence, it is upon the whole amenable to simple treatment. The vaginitis of the old is probably the cause of those common, partial, thin-edged vaginal strictures which are so frequently found high in the passage.

Now, besides these two forms of acute vaginitis, the vaginitis of mature life and of old age, you have chronic vaginitis.

Chronic vaginitis of youth occurs in various forms. There is a chronic vaginitis in which the vagina is hard and small, its rugæ well seen, but yet evidently swollen, œdematous, and with either no secretion or with the rugæ painted over by an old grey-white accumulation of sordid epithelial detritus. This kind of vaginitis is not rare, and it sometimes escapes notice, because, although it may be connected with vaginismus, it often produces no symptoms. Of this form we had a case in "Martha" a few days ago.

This, which may be called dry vaginitis, has its analogue in a disease of the deep cavities of the nose, which I have suspected as producing peculiar headache and giddiness, and which is assuaged or cured by the same soothing remedies as act on the disease in the vagina. Another disease I may mention, remotely analogous to this. Many of you remember the last ovariotomy performed in "Martha," and you must have seen that woman's uterus pulled out of the pelvis, red and having the appearance of a fresh section of raw beef. That was a case of dry chronic peritonitis without any secretion or symptoms. It did not interfere with her good recovery. I spoke of this condition in my lecture on "Hydroperitoneum."

In some cases the cervix uteri is diseased as well as the vagina, and I shall read an example which occurred in "Martha" lately. In this we had, probably as a result of an acute vaginitis, a chronic vaginitis accompanied by cystitis, urethritis, and only imperfectly cured after long perseverance.

S. H., aged twenty-seven; general health good; has been married more than a year, but has not been pregnant. Has been under treatment, in another ward, for some months, for chronic catarrh of the bladder. Had an abscess in a labium majus, and yellow vaginal discharge, before admission to the hospital. Her urgent symptoms depend on

frequent calls to painful urination. Private parts so tender as to necessitate the use of chloroform in most of the examinations. Vulva, vestibule, hymen, intensely red. Bladder hard, exquisitely tender, contracted so as to have only two inches from orifice of urethra to fundus. Laudable pus flows from vagina, and can be expressed from urethra. Speculum shows vagina to be red; rugæ not seen; surface not granulated, but has an œdematous appearance. Uterus healthy. To have hot hip-bath and morphia suppository at bedtime, and a copaiba mixture several times daily. Bismuth powder lotion twice daily per vaginam. Milk diet. Saline laxatives when required. Not to get out of bed. Under this treatment she gradually improved. Subsequently the bladder was daily washed with an acidulated solution of sulphate of quinine, two grains to an ounce; and still later with subnitrate of bismuth suspended in water. After three months of diligent treatment, the vaginitis and urethritis were cured, the bladder had greatly increased in capacity and was less irritable, but the urination was still unnaturally and distressingly frequent.

The chronic vaginitis of old age, as I have already said, is generally accompanied by pruritus, and frequently causes alarm by bleeding. Here is an example of it, in which we have, besides the vaginitis, incurable hypertrophy of the urethra.

E. S., aged forty-seven, has been married for twenty years, and has had three children, no miscarriage; the last child born twelve years ago. Catamenia began at thirteen years of age, and continued (with some irregularity the last twelve years) till a year ago, when they ceased. For nine years has had a green watery discharge from the vagina, which is, at least sometimes, fœtid. Coitus very painful for the last two years. Her appearance is unhealthy, and her urine is loaded with lithates. The urethra is hypertrophied, hardened, and feeling like a small finger. Except slight redness, it presents no unnatural appearance to the eye. It is tender to touch per vaginam and on using the sound. The bladder and womb are natural. The vagina has a polished, slightly reddened, tender surface, which readily bleeds at various points when touched. Glycerine cotton plugs were used for three weeks, and for a month she had twice daily an astringent lotion of ten ounces of tepid water with thirty grains of alum, and as much of sulphate of zinc in solution. She was discharged greatly relieved, yet her disease was not quite cured.

I have mentioned many forms of vaginitis, and one important practical subject I must discuss briefly in connexion with the forms of this disease. Is it, in any special case, venereal or not venereal? You will, in practice, often be asked this question, and I advise you never to answer it explicitly. You cannot decide absolutely whether a case is venereal or not. At one time it was supposed that the discovery of trichomonads, or a leptothrix, or a vibrio, would decide whether it was venereal or not. But this is now given up. I have seen gonorrhœa which was certainly not venereal bear every character of the ordinary venereal disease. I do not say that there is no distinction, but only that the distinction cannot be made out by the practitioner so as to justify him, from his own inquiries into a case, in giving a decided opinion on the subject. Meantime, the distinctions of venereal gonorrhœa are simply marks of severity. It has been said that venereal gonorrhœa is infectious, while simple gonorrhœa is not; but I have seen every character that can be predicated of the one occur in the other, as I said before, including infection.

What are the characters that make you suspect that a vaginitis is of venereal origin? It begins within a few days—generally two or three—of the infection; it is very severe, and runs an acute course; the secretion of pus is copious, beginning about the third day of the inflammation, and remaining copious for about a week or nine days. The vulva is generally affected, so that the woman has more or less difficulty in walking; and the vulva being affected, the inguinal glands are liable to be affected, and you may even have bubo. The urethra is affected, and also the bladder; there is liability to ovaritis and to perioophoritis; and there is the almost certain infection, not only by sexual intercourse, but by the matter touching any mucous surface, such as that of the eye.

I have little time to make remarks upon treatment, and indeed the treatment of this disease is illustrated by the cases I have read, and it is so well described in every textbook that it would be only waste of this day's time to enter upon it. It must be based upon a careful diagnosis, including the diagnosis of the local or constitutional origin of the disease, the diagnosis of the simplicity of the affection, or of its complication or extension to other parts.

The acute disease is treated by diet, and purgatives, and baths, and rest. Locally it is treated at first by emollient injection, such as that of decoction of poppy-heads; and afterwards by other injections, such as that of dilute liq. plumbi diacetatis; and at the end by injection of very dilute astringents, as of the sulpho-carbolate of zinc. All these injections are made with such an instrument as I here show you. The injection is of about ten ounces, and it is passed slowly through the vagina. It is good treatment, in a tiresome case, to apply weak, or sometimes strongish, solution of silver nitrate to the vagina, and that is done by a blunt-pointed glass syringe. You pass something like an ounce into the vagina, through it.

The chronic disease is treated in many respects as the acute or subacute, only you place more reliance upon the use of powders suspended in water—such as the white bismuth. An excellent remedy is a weak solution (five or six grains to the ounce) of sulpho-carbolate of zinc; and I shall conclude the lecture by reading to you a case of simple chronic vaginitis with smooth glazed surface, which, after we were afraid it would prove rebellious to treatment, was quickly cured by the use of the hot douche. This is the injection into the vagina of a large quantity of water at a blood heat; and the water is injected, for several minutes, with considerable force, which may be estimated by my telling you that it will throw it four and a half feet high. This powerful remedy proved of curative value in the case I am to read to you.

M. F., aged thirty-seven, has been married eight years, and has had no children. The catamenia began at thirteen years, and were regular and somewhat painful till recently, when they have been delayed sometimes to the extent of two weeks. For about nineteen months she has suffered from pain in the situation of the vagina, yellow discharge, painful coitus; and in the earlier period of her illness she had painful micturition. She has slight pain on pressure over the right kidney. No pain on defæcation. The pain in the vagina comes in paroxysms several times a day. She says that the yellow discharge has latterly diminished considerably. The finger finds an unnatural smoothness of the vagina. The speculum reveals no disease of the cervix, but the vagina is smooth, slightly redder than natural, and painted over with yellowish muco-pus. After the failure of long-continued ordinary treatment as an out-patient, and for a short time in "Martha," she was ordered to have twice daily the vaginal douche of hot water at about blood heat for some fifteen minutes each time. Of this treatment she quickly felt advantage, and after five days of it she left the hospital quite well. The vagina had lost its œdematous smoothness, and was pale and rugous in a natural manner.

Disguising the Taste of Epsom Salts.—The *purgatif Yvon* consists of sulphate of magnesia twenty grammes, water forty grammes, and essence of mint two or three drops. The essence of mint completely masks the disagreeable taste of the sulphate, providing that the quantity of the vehicle is inconsiderable. This preparation is easily taken by persons to whom the disagreeable taste of the Epsom salt is repugnant.—*Gaz. des Hop.*, June 12.

Bounties on French Babies.—"People are uneasy, and with reason, at the diminution of natality in France; and is it not time that every effort were made to remove this social peril? I am certainly not the first to express this wish by the following formula, which may perhaps be found too rough (*brutale*), but which at least possesses the merit of being clear, and of saying that which I wish to say. Do for the raising of men what you do for the raising of useful animals. Accord prizes, bounties, medals, 'honourable mentions,' and rewards of every description, material and honorary, to the best and most prolific mothers, and to the best and most careful nurses. Accord every kind of favour, every kind of dispensation, and every kind of aid to large families, and let the arrival of a new infant in each home not be regarded as a new source of trouble, but considered as a benefit and reward."—Dr. Simplice, *Union Méd.*, June 12.

ORIGINAL COMMUNICATIONS.

YAWS: GEOGRAPHY OF THE DISEASE.

By GAVIN MILROY, M.D., F.R.C.P.

It is only of late years that the full value of geographical medicine has begun to be duly recognised, as affording a necessary element in any logical inquiry to determine the true etiology of certain maladies, and thence to discover the rational means that may lead to their mitigation or repression. The truth of this proposition holds good in respect of both the great nosological divisions, viz., (1) the class of acute and temporary diseases, which are of only occasional occurrence and prevalence, and then disappear; and (2) the class of chronic endemic diseases which are continuously existent among a population, and are usually indicative of a more or less depraved condition of the constitutional health.

With respect to the *first* class, no more signal example of the importance of geographical medicine need be chosen than the significant fact that, of recent years, the existence of "enteric fever" has been acknowledged as indisputably occurring in our European troops in India, and the more than reasonable suspicion that the "relapsing" form of the disease has also been recognised among the endemic "pyrexiæ" in that special field of British medical research. And so in like manner with other extensive regions of the world in which are prevalent fevers that are of varied types, but of whose distinctive individual characters much yet remains to be clearly made out before the precision requirements of modern diagnosis can be satisfied. The fevers which abound along the shores of the Mediterranean and the Caribbean seas need in this respect very diligent and patient scrutiny. That the "enteric" form has been discovered in various localities in the West Indies, etc., is beyond doubt; but to what extent it may prevail, and under what special circumstances it generally occurs, has not as yet been distinctly ascertained.

Then, too, there is much obscurity as to our exact knowledge of the precursory and initial forms of febrile disease preceding the development of unmistakable epidemic yellow fever—that *opprobrium medicinæ*, respecting which we are in the present day as much at sea as at the beginning of the century—and which are observed in the milder or less grave cases; those which are unattended with any tendency to hæmorrhagic symptoms, and in which the majority of the patients ultimately recover. Are such cases instances of the ordinary remittent endemic in the locality; or, if not, what is their distinctive nature and character?

Again, what is the true relation between the West Indian pestilence and the occasional sporadic cases of yellow fever which occur in various localities in the East Indies, and which manifest the like formidable and rapidly fatal symptoms?

But it is in regard of the *second* class that the great value of determining the correct geography of diseases is still more to be appreciated, as may be judged of from the following illustrations among numerous other examples which might be cited:—

(*a.*) From the want, for many years past, of additional trustworthy information respecting the geographical existence of *goître* in different countries, very little, if any, substantial progress has been made of late in elucidating the etiological relations of this remarkable malady, the real local causes of which are yet most imperfectly understood.

(*b.*) In respect of *leprosy*, the most notable geographical truth—and it is one of great practical importance—is that this cachectic disease, which two or three centuries ago used to be common throughout most of Europe, has ceased to exist except in a few localities or districts; and that this disappearance of a most unmanageable disorder was gradual and progressive, corresponding with the advancement of civilisation, and the improvement of the dietetic and other hygienic conditions of the poorer classes.

In connexion with the geographical question, theoretical writers have sought to associate some chronological assertions respecting the supposed first and original appearance of the disease in certain countries, with the view of establishing or confirming their hypothetical doctrines as to its contagious properties, and the mode of its propagation from one country to another by direct personal intercourse. This has been notably the case in reference to the Sandwich Islands, since the publication of a detailed letter on the subject by Dr. Hillebrand in the *East Indian Medical Gazette* of 1866. This letter was, at the request of the Secretary of State for the Colonies, in 1872 reported on by the College of Physicians, which, after a careful examination of its contents, did not hesitate to record its opinion "that many of the statements made by Dr. Hillebrand are so lacking in precision, as well as deficient in details, while others are based on mere hearsay evidence, that the College is compelled to receive them with very great reserve."(a) The necessity for scrupulous exactness and verification of data, in respect both of localities and of dates, must be obvious to all.

(*c.*) And now with reference to *Yaws*—the geographical prevalence of which it is the special object of this paper to consider. In my last article upon this disease in this journal (February 21, 1880), I alluded particularly to the recent discovery of the existence of the malady in the Fiji Islands and in Ceylon, which I then supposed were the only localities in the Pacific where its presence had been distinctly recognised. But, my attention having since been drawn to the descriptions of the disease in the latest French publications, I have learned, to my surprise and satisfaction, the widely spread prevalence of the affection in various regions of the world, under different vernacular appellations, which are all, it is believed, intended to refer to the same identical disorder. The publications are the "Dictionnaire Encyclopédique des Sciences Médicales," tome 4me, article "Frambœsia," by Dr. Victor Rochas, Paris, 1879; and the "Dictionnaire de Médecine et de Chirurgie," tome 27me, article "Pian," by Dr. I. Rochard, Paris, 1879. The authors agree in stating that the malady known as *Yaws* in the British West Indies and in the West Coast of Africa, and as *pian* in the French West Indian colonies (*mycosis framboisé* of Alibert), is the same disease that is called *bubas* in Brazil(b) and Spanish South American colonies, *pateh* or *bouton d'Amboine*(c) in the Molucca Islands, and *tonga* in New Caledonia and other Melanesian Islands, as related by Dr. Rochas in his "Essai sur la Topographie hygiénique et médicale de la Nouvelle Calédonie," Paris, 1860. He had seen the disease also in the Fiji and Loyalty Islands. Moreover, it is well known to exist in some parts of the East Coast of Africa, and along the shores of the Mozambique Channel on to Madagascar and the Comorrho Islands, whence it probably spread to the Coromandel Coast of India, "où il existe surement."

In 1863, M. Dalry published a short memoir. "La Médecine chez les Chinois," Paris, wherein he describes an affection, called by the natives *le yang-mey-tcheang* (ulcère en forme de framboise). Dr. Rochas observes upon the subject, "s'agit-il ici d'une des formes multiples du frambœsia vulgaire, dont la Yang-mey-Tcheang a sensiblement le siége, la marche, et les caractères physiques, ou bien d'une syphilide papulo-squameuse, ulcéreuse, secondaire ou tertiaire?"

Before quitting the topic of the geography of the disease, I would venture to express a hope that the medical profession in our West India colonies may be disposed to undertake a systematic investigation, through the obtaining of documentary evidence of a thoroughly trustworthy character, as to the existence and prevalence, or otherwise, of the malady in the different islands of the Carribean archipelago, British, French, Spanish, and Danish. As yet there is still a large amount of uncertainty upon this question, even in regard to several of our own colonies. Barbadoes and Antigua are generally believed to be exempt from the disorder; and the same is sometimes alleged in respect of the French colony of Martinique. If this belief be found to be strictly correct, it will be a curious problem to account for such immunity while the adjoining islands are more or less affected. Dr. Bowerbank, in his interesting communication (*Medical Times and Gazette* of April 3), says:—"A few years ago, a gentleman assured me that, in this island of Grenada or St. Vincent, coolie immigration was quite crippled by the ravages of this disease" (Yaws). Surely these facts must admit of some definite explanation. Neither Dr. Rochard nor Dr. Rochas seems to have seen the malady either in the West Indies or in South America.

(a) *Medical Times and Gazette*, July 17, 1875.

(b) Described by Dr. Pison in his work "De Medicina Bresiliensi," 1648. He says that the disease "nait particulièrement de l'usage des aliments décomposés et salés, et des boissons altérés et corrompues."

(c) Bontius, "De Medicina Indica," 1748.

Both writers regard the disease as highly contagious—the one declaring it to be "eminently" and the other as "essentially" so. Dr. Rochas says—"Nous conclurons que la contagion est bien la seule cause efficiente de pian, et que ce mal indigène à la *côte occidentale* d'Afrique(d) depuis les rives de Senegal jusqu'au Cape Négro avait été importé aux Antilles." He then adds—"Mais il y a un autre foyer à la *côte orientale* d'Afrique, au canal Mozambique d'ou le mal s'est propagé à Madagascar," etc.; and he throws out the question for further inquiry whether the disease has spread from that region to the islands of Melanesia, etc., or "a-t-il pris naissance *spontanement* parmi les populations misérables de ces contrées intertropicales, comme il a fait en Afrique?—c'est ce qu'on ne sauroit dire."

It thus appears that the problem as to the origination of the malady in the Eastern Hemisphere is far from being solved, and that there still remains a fine field for etiological research among medical men, either resident in any of the Pacific islands, or who may chance to visit them occasionally. The medical officers of the navy, and of the numerous mercantile vessels that now traverse every part of that ocean, may have frequent opportunities of thus adding valuable data to our knowledge if they will record the results of their experience and personal observation, apart from merely unverified traditions or popular rumours, which are so generally misleading. If it be really an unquestionable fact that the disease is indigenous along the Mozambique coast, as alleged by the French writers whom we have quoted, it may most reasonably be supposed that it cannot be unknown at Zanzibar, where so able and intelligent a man as Dr. Kirk has been so long resident; nor yet at the islands of Mauritius and Bourbon, which are at no great distance from Madagascar, where it is said to be common. Again, the now ascertained truth that the malady exists in the Fiji Islands and in New Caledonia, which are situated due east from the northern part of the Australian continent and in the same latitude,—no one would be surprised to learn that it, or some disorder akin to it, was not unknown among the inhabitants of Carpentaria or other northern parts of Australia.

Both Dr. Rochard and Dr. Rochas, while admitting that the external symptoms of Yaws are at times extremely like in appearance to those of syphilitic eruptions, distinctly state that the two diseases are anything but identical. The latter writer observes that "à la Martinique, celui-ci (chancre induré) est resté, et le pian a disparu. A la Nouvelle Calédonie, il est aussi rare parmi les indigènes, et tous passent par le pian; . . . affection à laquelle n'échappent qu'un petit nombre d'indigènes."

In respect of the medical treatment of Yaws, both writers accept with commendation the remedies approved of by Drs. Imray and Bowerbank, as detailed in my West India Report. How different from the antisyphilitic medication once in vogue! Dr. Rochas adds—"Le tout est aidée d'une nourriture aussi substantielle que possible, composée de viande, poisson frais, et de legumes cuits."

Académie de Médecine.—Dr. Dujardin-Beaumetz has just been elected into the Section of Therapeutics by the votes of fifty-one of the seventy-three of the Academicians who were present.

The Brighton Sanatorium.—It was reported at a recent meeting of the Brighton Town Council that the Local Government Board had released the Corporation from the conditions previously imposed with regard to raising a loan for the purpose of purchasing a site for a sanatorium. The local authorities had secured ten acres—requiring only four,—and the Local Government Board would not sanction the borrowing of the money unless the whole was retained for the sanatorium and its grounds. A deputation having waited on them and pointed out the unnecessary expense that would be incurred, the Board has now sanctioned the disposal by the Corporation of one-half of the land.

(d) In the yearly return of cases treated in Kissy Hospital, Sierra Leone, during the twelve months from December 31, 1840, to December 31, 1841, there were 116 cases of framboesia, of which seventy are reported as "recovered" and eight proved fatal ("Sierra Leone," by Robert Clarke, M.R.C.S. Edin., Senior Assistant-Surgeon to the Colony; London, Ridgway, 1846). In Mr. Clarke's paper on the Diseases of the Gold Coast, in the *Transactions of the Epidemiological Society*, vol. i., he remarks:—"Dry gangrene, especially of the little toe, is a disease of rather common occurrence among the natives, and from inquiries I have made on the subject I find that it is frequently a sequence of suppressed Yaws" (p. 105).

THE LISTERIAN METHOD IN OVARIOTOMY.

By LAWSON TAIT, F.R.C.S.,
Surgeon to the Birmingham and Midland Hospital for Women.

In Mr. Knowsley Thornton's paper he tells us that his mortality in ovariotomy performed with full Listerian precautions is 10·76 per cent. In the recent discussion at the Royal Medico-Chirurgical Society I was led to believe that his results were much better than this. Probably I misunderstood him, but if I had known the facts exactly I should have said more in my reply than I ventured upon.

In the discussion the position I held was, that the great success in recent ovariotomy practice is to be put down to the complete adoption of the intra-peritoneal treatment of the pedicle, and to increased experience on the part of the operators, and that, so far as we have got, there exists no physical proof whatever that the Listerian precautions have contributed in any way to this increased success. In my own practice I think I have shown conclusively that the Listerian dressings have done a great deal of mischief, and therefore I have given them up.

Mr. Knowsley Thornton's figures give full support to my position, and so do all the statistics I can find. Let me display a summary of them.

	No. of cases.	Mortality per cent.
Clamp Cases, without the Antiseptic Precautions.		
Dr. Keith	47	19·2
Mr. Spencer Wells	627	20·73
Mr. Thornton	6	50·0
Mr. Lawson Tait	37	25·0
Clamp Cases with full Antiseptic Precautions.		
Mr. Lawson Tait	26	26·9
Intra-peritoneal Cases, Non-antiseptic.		
Dr. Keith	50	8·0
Mr. Thornton	30	16·6
Mr. Lawson Tait	17	6·6
Intra-peritoneal Cases, Antiseptic.		
Dr. Keith	50	6·0
Mr. Thornton	130	10·76
Mr. Lawson Tait	56	4·35

Now, it seems to me that it is utterly impossible to look at these figures, gathered from the practice of four different surgeons—the experience of all four being large, and in one case (that of Mr. Spencer Wells) most exceptionally large—without seeing that what I have repeatedly said is correct: that the normal mortality of the clamp is about 20 per cent.; and this is not in the least affected by antiseptics.

The moment the pedicle is treated by any of the intra-peritoneal methods the mortality drops to 10 per cent., again quite independently of antiseptics; and then the mortality is further steadily reduced by growing experience on the part of the operator, as is most conclusively shown by the case of Dr. Keith, whose mortality slowly fell to something like 6 per cent. before he used the antiseptic method at all.

I have already published my experience as having decided me against Mr. Lister's dressings. Mr. Thornton now tells us that there is risk in the spray. We all suspected this, but Mr. Thornton has been the first to experience it, or, at least, to form a decided opinion concerning it. I think if I were to have two deaths from the spray I should give it up. At present I have seen no harm from it.

Only one other point in Mr. Thornton's paper I desire to allude to, and that is his statement that tapping, without antiseptic precautions, produces septicæmia in a large number of cases. This statement is so thoroughly contrary to my own experience, that I cannot discuss it in real seriousness. I have tapped a number of times too great to estimate accurately, and have never yet seen the operation produce septicæmia. I have seen it do harm, but not in that direction.

But if it is the introduction of germs by the trocar which does mischief, may I ask if Mr. Thornton takes antiseptic precautions in giving a hypodermic injection of morphia? If he does not, then he is inconsistent, for Dr. William Roberts has shown that the morphia syringe is as certain a fertiliser as anything can be.

Birmingham.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

ST. THOMAS'S HOSPITAL.

MITRAL OBSTRUCTION WITHOUT PRESYSTOLIC MURMUR.

(Under the care of Dr. STONE.)

Mary A. G., aged thirty-five, admitted May 18, 1880, stated that she had been married seventeen years, and had three children. Had always been in good health, and accustomed to hard work, until six months previously, when she began to suffer from severe pain in the back and loins. The catamenia had been regular until an attack of menorrhagia about the same period, attributed to the labour of washing clothes. She attended at King's College Hospital for this affection, where a polypus was removed from her womb. For a week there had been swelling of the legs and feet. On admission she was sallow and puffy in face, the capillaries of the cheeks being dilated. She complained of much pain in the lumbar region, with diarrhœa and abdominal tenderness. There was some ascites, and considerable œdema of the legs. The hepatic dulness commenced at the seventh rib, and extended seven inches downwards. The lungs anteriorly were resonant, but there was considerable friction sound in the right mammary region, and also in the left axilla. Posteriorly there was complete dulness over the lower third of the left, and the lower fourth of the right lung, with feeble breathing, diminution of vocal fremitus, and abundant friction sounds. Heart not increased upwards or towards the right side. Action irregular and leaping. A marked purring thrill to be felt over the præcordial region, but no presystolic murmur to be heard. The thrill was most marked in the seventh interspace, about one inch external to the nipple. At the position of the apex there was a soft blowing murmur, not conducted towards the base, where both sounds were accentuated, but normal. Pulse 120, tense, with visible brachial pulsation; respirations 40. Urine, specific gravity 1014, clear, pale, containing a trace of albumen, with free blood-cells and granular casts; it was scanty, averaging from twelve to twenty ounces daily, and never highly charged with albumen. The dyspnœa increased, but otherwise the case remained unchanged in all its aspects until June 9, when she died.

On opening the thorax, the lower third of both pleuræ was found to be occupied by serous fluid, intersected by many fibrinous bands. These, and an œdematous crystalline fibrinous layer, covering the pleura to the depth of about half an inch, were especially marked at the left base in the flank, and on the pleural surface of the pericardium. There was, however, no effusion of lymph or fluid within the pericardium itself. The mitral valve, on looking down upon it from above, was seen to be uniformly contracted and puckered round its edge, so that the perimeter of its orifice was materially diminished. It resembled more the frill of a ruffle, or the pleated neck of a bag, than its usual plain, sheet-like surface. On being tested with a column of water, however, it proved to be very fairly competent, permitting little, if any, regurgitation, even in the post-mortem condition. The aortic valves were healthy and competent. There was not very great hypertrophy of the cardiac muscle, the right side being rather the most affected, especially the auricle, which was distended, and measured from one-quarter to three-eighths of an inch in thickness. The left auricle was scarcely above normal size. The kidneys were rather large, pale, with radial streaking on section, and only slightly adherent to the capsule in a few places.

In commenting on the case, Dr. Stone remarked that mitral obstruction, fairly free from regurgitation, was diagnosed from the first, though nothing of the nature of a presystolic murmur had at any time been heard. He believed, and indeed had affirmed in the Croonian Lectures for 1879, that the presystolic thrill, sensible to the hand, was a far more common and trustworthy sign of mitral obstruction than the corresponding sound detected by auscultation. According to the laws of acoustics, such a vibration must reach a rapidity of forty per second, more or less, before it became amenable to the aural apparatus; whereas it was clearly detectable by tactile sensation at a much lower vibration number. In cases like the present, where there had not been very great occasion or opportunity for the left auricle to hypertrophy, the mechanical cause for a sound-wave was clearly absent. The regurgitation was here very small; the obstruction, as evidenced both by symptoms and by post-mortem appearances, recent. But the thrill conveyed to the delicate papillæ of the fingers was so marked as to be all but pathognomonic. Many auscultatory phenomena, he believed, were really complex, compounded instinctively of tactile and of auditory sensations, which were in a certain sense continuous with one another.

MIDDLESEX HOSPITAL.

A GROUP OF CASES OF MALIGNANT DISEASE AFFECTING THE FACE AND NECK.

(Under the care of Mr. MORRIS.)

Case 1.—Epithelioma of the Cheek (Right Side)—Ligature of Facial—Removal of Disease.

George R., aged fifty-five, a carman, a short, thick-set, aged-looking man, applied to me at the cancer out-patient department in April, 1874. He had for some time previously been attending Dr. Cayley's out-patient room, by whom he was treated for gastric pain and disturbance, and by whom he was sent to me on account of a cancerous growth in the cheek.

When I first saw him there was a lump the size of a large cob-nut projecting the skin of the cheek on a level with the lower molars and body of the jaw just in front of the ramus. Although the skin over it was stretched it could be puckered up into folds between the finger and thumb. The lump bulged a little towards the cavity of the mouth also, so that it was situated in the substance of the cheek and occupied the greater part of the thickness of it. On looking into the mouth an indurated warty ulcer was seen on the level of, and extending to a little below the level of, the upper molars. The free surface of this ulcer was nodulated and ashy grey in colour. On the external aspect nothing was here observable; the skin was entirely uninvolved, and no evidence whatever existed of the indurated mass on the inner side of this part of the cheek. While the mouth was held open, however, the skin was noticed to be puckered and stretched in a longitudinal line from the lower and external lump upwards nearly to the level of the upper and internal mass; and on the inner side of the cheek there was felt a hard, narrow cord connecting the upper and lower masses. There was no enlargement of the submaxillary lymphatic glands. The patient stated that the first he noticed of this disease was a few weeks after Christmas last, when he detected, while washing, a lump like a marble on a level with the lower teeth. About the same time he felt with his tongue a lump on the inner side of the cheek. These two increased together pretty evenly up to the present time.

It did not at first seem that any operation short of removing a very considerable portion of the whole thickness of the cheek would be of any service to him; and it seemed more than probable that the cicatrix which would form after the operation would be extremely tense and rigid, even if it were found possible to bring the margins of the fresh wound into immediate apposition. This tense cicatrix, it was feared, would diminish the cavity and aperture of the mouth; and, being often irritated, and perhaps ulcerated, would be likely to induce a very speedy return of the cancer.

For these reasons I did not think it well to recommend an operation. After a week or two he was, however, to return to me, and this he did in the second week in May. I then decided to admit him, and reconsider the advisability of an operation. He was admitted on May 26. The lower mass had increased towards the buccal cavity since first seen. It bulged on the line of and above the lower molars when the mouth was open. The cord between the two masses was considered to be very much more marked. Lymphatic glands quite unaffected.

June 3.—Having decided to operate, the patient was placed under chloroform. I then ligatured the facial artery just as it was turning over the jaw. I next made a vertical

incision parallel to, and in front of, the anterior border of the right ramus of the jaw from the malar bone downwards, and then connected the middle spot of this with an oblique incision running downwards and forwards in front of the lower mass. In this way the skin covering the lower mass and on all sides of it was included between the two incisions. The whole substance of the cheek in the area thus included was dissected out. Very little bleeding occurred, although one or two small vessels required to be twisted. Having thus cut out the lower mass, I next prolonged the upper end of the vertical incision in a curvilinear manner forwards, and reflected the skin on each side. An assistant then compressed the transverse facial artery upon the ramus of the jaw, and with one or two sweeps of the scalpel I cut away the inner and upper mass and the cord connecting it with the lower one. This dissection extended upwards under the malar bone and malar part of the zygomatic arch, and involved the whole thickness of the cheek except the skin. Some smart hæmorrhage occurred for a few seconds, but was very easily and quickly overcome by placing a couple of ligatures upon the bleeding vessels. By thus manœuvring the incisions it was found very easy to bring the margins of the wound together without any undue traction, and they were held together by means of a very fine continuous suture. The wound was dressed with lint soaked in weak carbolic water, and a flake or two of cotton-wool soaked in the same was inserted between the lower jaw and the cheek. The patient was ordered to keep his mouth free of food for a time, was allowed ice to suck, and was to be fed by five ounces of beef-tea as an enema every four hours. Liq. opii sed. ♏xx., aq. ℥j., statim.

4th.—Injections were tolerated. One action of bowels this morning. Pulse 64. Skin normal. Wound looking well.

9th.—The lower angle of the wound is gaping, and the margins are inflamed along an extent of three-quarters of an inch from its lower end. All the rest has healed by first intention. It was found that a flake of cotton-wool had been left between the cheek and jaw for two or three days, and that this, no doubt, set up the inflammation at the lower end of the wound.

11th.—All ligatures and sutures away except the ligature on the facial artery.

14th.—Just the lower angle of wound still gapes; a hare-lip pin passed to bring margins together.

20th.—Complains of the old pain in the stomach, and of bowels being confined. Ol. ricini ℥ss. stat. s. rep. si op. sit. Mist. bismuthi ℥j., ol. menth. pip. m.f.t.d.

July 7.—Patient is now convalescent, and the wound is healed. To be made an out-patient under Dr. Cayley.

January 14, 1875.—Returned to see me, as he is suffering from externo-internal hæmorrhoids. The cicatrix in the face is quite healthy, and, with the exception of a narrow linear scar seen below the malar bone and in front of the whiskers, there is no difference on the two sides of his face. The scar at the lower end is wider and more marked, but cannot be seen except by separating the hairs of the whiskers. There is no sign whatever of recurring disease either in the cheek or glands. Says his mouth "feels all right." Has been attending Dr. Cayley constantly for "gastric" trouble.

December 20, 1875.—This patient has to-day been before Mr. Lucas, the Resident Medical Officer, who tells me that he is going to admit him for "gastralgia." There is no sign whatever of any recurrence at the seat of operation or elsewhere, and there is not much of a scar to be seen now.

(*To be continued.*)

PRODUCTION OF SEX AT WILL.—Mr. Fiquet, a cattle-breeder of Texas, claims (in *Boston Med. Journal*, May 13) to have discovered a way by which either sex may be produced at will. His theory is that when the female at the time of coition is comparatively cold, and the male very passionate, a female will be the result. A reversal of the conditions will produce a male. Mr. Fiquet secures the proper conditions by feeding the bull, for example, on rich food previous to coition, the cows at the same time being kept on low diet, and submitted to the gallantries of a castrated bull until the excess of their passion has worked itself off. In all the experiments hitherto tried, numbering fifteen or twenty, he has been successful in predicting the sex.—*New York Med. Record*, May 22.

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Medical Times and Gazette.

SATURDAY, JUNE 26, 1880.

THE GOVERNMENT OF UNREASON.

MR. DODSON'S Bill to amend the Vaccination Acts has been introduced in the House of Commons, and must be regarded with astonishment by all persons of education and intelligence, and by the vast majority of sensible people with dismay. It consists, in effect, of one clause, by which it is proposed to enact that "after the passing of this Act no parent of a child shall be liable to be convicted for neglecting to take or to cause to be taken such child to be vaccinated, or for disobedience to any order directing such child to be vaccinated, if either (*a*) he has been previously adjudged to pay the full penalty of twenty shillings for any of such offences with respect to such child, or (*b*) he has been previously twice adjudged to pay any penalty for any of such offences in respect of such child." This Bill, if passed, must, if it means anything, inevitably lead to the abolition of compulsory vaccination. But Mr. Dodson, in his speech in the Animal Vaccination debate, on the 11th inst., expressly declared that such a measure as that would not be justifiable. He observed that vaccination had been attacked on different sides, but that the opponents might almost be left to demolish each other; and he brought forward proofs of the immense value of vaccination, and pointed out that the very greatest care was taken by the Vaccine Department to supply only the purest lymph. With regard to compulsory vaccination, he said that "he was not at all in favour of compulsion upon the individual, and, before it was resorted to, a most preponderating and overwhelming case must be made out in the interests of the public at large. In regard to vaccination, he must say he did not think its opponents had made out such a case against it as would justify the House in overthrowing the present system." Could anything have been said, by a person in the responsible position of a Minister, more distinctly in favour of upholding compulsory vaccination—the present system? It seems inexplicable

how a man, holding such an opinion, could have come to the conclusion that persistent obstinacy in disobeying the Act ought to be rewarded by immunity from punishment. The only reasons given by Mr. Dodson were that the Select Committee of 1871 had recommended the abolition of multiple penalties, and that the Bills introduced in 1871 and 1872 to carry out the recommendation had failed to pass into law. It is quite true that in 1871 a Select Committee was appointed to inquire into, and report upon, the Vaccination Act (1867), and that that Committee in their report showed themselves as marvellously illogical as is Mr. Dodson. They took a great amount of evidence of all kinds, and reported, "That the cow-pox affords, if not an absolute, yet a very great, protection against an attack of small-pox, and an almost absolute protection against death from that disease." That, if performed with due regard to the health of the person vaccinated, and with proper precautions in obtaining and using the lymph, "there need be no apprehension that vaccination will injure health, or communicate disease," "that the small-pox unchecked by vaccination is one of the most terrible and destructive of diseases as regards the danger of infection, the proportion of deaths among those attacked, and the permanent injury to the survivors." And they drew the logical conclusion, "Therefore it is the duty of the State to endeavour to secure the careful vaccination of the whole population." But having paid this tribute to knowledge, experience, and reason, the report (we know not whether Mr. Dodson was a member of the Committee) went on to observe, with regard to the enforcement of the law, that if a parent obstinately refuse, the child may remain unvaccinated after all, though great feeling may be excited for the parent; and therefore they unanimously recommended that the law, already imperfect as respects the vaccination of the child, should be made still more imperfect by limiting the penalties, exactly in the way proposed by Mr. Dodson. A clause to carry the recommendation into effect was inserted in the Vaccination Bill of 1871, but was obliged to be thrown overboard to save the Bill. In 1872, Mr. Pease introduced a Bill for the special object of repealing multiple penalties; and it is interesting to recall one or two incidents of the debate on the second reading. Mr. Monk and Mr. C. S. Read moved the rejection of the Bill, on the ground that it invited disobedience to the law, and would render compulsory vaccination impossible. Mr. Lyon Playfair, who was a member of the Select Committee of 1871, recanted his opinion, and declared that, in 1872, he was irreconcilably opposed to the limitation of penalties; and another member of that Committee also opposed the Bill. Mr. W. E. Forster looked upon the question as entirely one of expediency; and held that penalties would have no effect upon those conscientiously opposed to vaccination so long as the State was not prepared to vaccinate the child even against the will of the parents. We confess to some sympathy with Mr. Forster on the last point, and have always pointed out the great weakness of the vaccination law in leaving the child unvaccinated. We can quite understand his approving the Government Bill brought in by Mr. Dodson; but what will Mr. Lyon Playfair, another member of the Ministry, and other Liberal members who opposed Mr. Pease's Bill, do now? Will they have the courage of their opinions, or will they prefer the interests of party to those of mankind? Any way, we feel confident that the Bill will be very strongly and stoutly, and we will hope successfully, opposed. We can understand that politicians who keep their minds open on the subject of vaccination may think it right or expedient to say, "We admit that so far it seems absolutely proved that vaccination affords very great, though not absolute, protection against one of the most terrible and destructive of diseases, while the probability of its ever doing harm is, or may be made, infinitesimally small, and we recognise the right and the duty of the State to procure, if possible, the protection of the whole population; but some few people obstinately object to vaccination, and some very active and noisy agitators have taken up their cause, and—who knows?—it *may* some day be shown that everybody else has been mistaken; therefore we will abolish compulsory vaccination." But we cannot understand their having the hardihood to propose to the Legislature, not to repeal the penal clauses of the Vaccination Act, but to sell, for a few shillings, licences to parents to leave their children unvaccinated—with impunity, so far as the law of the land is concerned; the law of disease is another matter, and its penalties will be rigorously inflicted, and not on the guilty only. We must trust that the Vaccination Acts Amendment Bill of the Local Government Board (we cannot believe that it has the approval of the Vaccine Department) will be deemed, even by the average member of Parliament, so preposterous, illogical, and mischievous, that the present Government, large as is their ordinary following, will not be able to pass it.

PROF. GUSSEROW ON TYPHOID FEVER DURING PREGNANCY AND THE PUERPERAL STATE.

Even the Croonian Lectures of 1880 have not exhausted the fertile subject of typhoid fever, and Professor Gusserow, in a recent discourse before the Berlin Medical Society (*Berlin. Klin. Wochenschrift*, No. 17, 1880) is able to offer some interesting and valuable information on the relations of that ubiquitous disease to the puerperal state.

He premises that typhoid fever is comparatively rare in pregnant women, especially in the later months of pregnancy, probably because they are less liable to be exposed to infection than healthy women. The statistics we possess on this subject are at present very scanty. At Basle, out of 1420 typhoid cases, 18, or 12 per 1000, were in pregnant women; while at Vienna, out of 1852 cases, only 24, or 13 per 1000, occurred in them. At Basle, abortion occurred in 83 per cent. of the cases observed; at Vienna in only 58 per cent.,—the treatment adopted, as will be presently shown, having an essential influence on its production. The mechanism of the abortion in the early months of pregnancy is not absolutely clear; changes in the placenta and decidua may result from the maternal illness, and so cause the death and casting-off of the fœtus. There is absolutely no proof whatever, in any case, of the occurrence of intra-uterine disease in the fœtus itself. Professor Gusserow has examined a number of fœtuses from typhoid women who have aborted, without ever finding a trace of alteration in the bowel, spleen, or elsewhere that could be referred to a typhoid origin. The great cause of abortion in typhoid fever appears to be a high temperature of the maternal blood. From Professor Gusserow's own observations, as well as from those of Hueter, Fiedler, Kaminsky, Georgi, and Winkel, there can be no doubt that the life of the fœtus is in danger as soon as the temperature of the mother exceeds 39° cent., that the danger becomes very great when it reaches 40°, and that the child inevitably dies if 41° to 41·5° be attained. The effect of high temperatures is greater the longer they last; the fœtus may tolerate a temperature of 40°, or even of 40·5° for a short time, while a protracted temperature of 39° may be fatal to it. Briefly stated, the danger to the fœtus is proportional to the duration and the height of the maternal temperature. Hence most cases of fœtal death occur in the second and third weeks of the fever. But abortion may take place during typhoid fever without the previous death of the fœtus, uterine contraction being the primary phenomenon. Such

cases appear to be not very uncommon, and here also the exciting cause seems to be a long-continued action of high temperatures. Most often Professor Gusserow has observed the occurrence of this form when the fever has kept for several days above 40° cent. with scarcely any remission, and, even where the birth-pains apparently begin during early convalescence, a careful analysis of such cases generally shows that their real commencement was before the end of the febrile period.

But there are some cases in which the exact connexion between temperature and uterine action is difficult to make out. In these there is a severe rigor, with sudden increase of fever, followed by the pains of labour, the act of birth being free from excessive hæmorrhage, and not unusually prolonged. Rigors, as Professor Gusserow points out, are unusual during the ordinary course of typhoid fever, nor can they be regarded, in the present state of our knowledge, as the result of the commencement of parturition, any more than the occurrence of uterine pains can be referred with certainty to the passing elevation of temperature which accompanies the rigor. At present these phenomena must be considered in the light of an unsolved riddle. The prognosis of abortion in typhoid fever depends on the period of pregnancy, and on the period of the fever at which it occurs. During the first three months of pregnancy severe hæmorrhage is liable to accompany the act, and the patient's life may be endangered by the loss of blood. Possibly some typhoid alteration of the uterine membranes may be present to account for it. In the later months the delivery is but little diverted from its normal course by the concomitant fever. For the patient, however, it is all-important at what time during the febrile period the delivery occurs. Her best chance is for it to take place very early in the course of the typhoid. When it comes—as, unfortunately, it generally does—at the height of the fever, or in the beginning of convalescence, the prognosis, for obvious reasons, is unfavourable. Professor Gusserow's experience, also, is that these patients are more liable to puerperal infection than other women. In concluding his lecture he illustrates by typical cases the difficulty of distinguishing between the early stages of typhoid fever at the time of childbed, and puerperal fever. The two affections may, very rarely, exist in combination. The diagnosis rests on the irregular temperature and absence of a dicrotous pulse, of roseola, and of diarrhœa in puerperal fever, as well as on the condition of the uterus and its appendages, and of the lochial discharge. Splenic enlargement is common to both diseases, and is often difficult to make out in puerperal women. Owing to the protean character of the symptoms both of typhoid and puerperal fever, the differential diagnosis may in some cases be a long time undecided. As to treatment: since the height of the fever is the main element in inducing abortion in pregnant women, the energetic use of antipyretic remedies is urgently indicated. Professor Gusserow has always of late treated both pregnant and parturient women with cold baths, with the best results. The artificial induction of labour in typhoid fever he regards as an error, and to be avoided.

DIETETIC TREATMENT OF CANCER.

Professor Beneke, of Marburg (*Berlin Klin. Wochenschrift*, No. 2, 1880), repeats a former suggestion of his, to the effect that by dieting patients with cancer, and especially those suffering from its soft forms, with food from which the albuminates, the alkaline and the earthy phosphates are to a great extent excluded, much may be done to check the abnormal cell-proliferation, and prolong, if not save, the patients' lives. He assumes that cancer-cells are relatively rich in cholea-stearin, leathin, and the above-mentioned phosphates, and the great source of these is animal food. Hence Dr. Beneke's cancer-diet allows only fifty grammes (barely two ounces) of meat, weighed before cooking, *per diem*, supplemented with a little fish in the form of anchovies, *sardines à l'huile*, or fresh herrings. Butter, sugar, rice, sago, potatoes, cream, nearly all kinds of fruit and green vegetables, are allowed, but bread is given sparingly or replaced by biscuits in limited quantity, and milk is excluded. As drinks, black tea with cream, cocoa, light Moselle or Rhine wines, and occasionally champagne, are allowed. Beer, owing to its richness in alkaline phosphates, must only be sparingly taken. Professor Beneke gives a diet-table for each meal in the day, the details of which we have not space to insert. He calculates that by following his rules the normal ratio of the nitrogenous to the non-nitrogenous constituents in ordinary mixed diet—namely, 1:5—can be reduced to 1:8 or 9. The potassium salts also enter the body chiefly as vegetable combinations, and not as phosphates, and the alkalinity of the blood-serum is thereby increased so as more nearly to resemble its condition in the herbivora, in whom, Professor Beneke remarks, cancer is very rare. In answer to the possible question, "Can a man exist on a diet so deficient in nitrogen and phosphates?" he quotes the *ipsissima verba* of several patients in the affirmative. One of these, an Englishman (affected, however, not with cancer, but with rheumatoid arthritis), has persevered in it for six years, with gain of weight and muscular force, as well also, according to his own statement, of mental vigour. As to the practical value of the method there is at present little to be said. Professor Beneke can muster only eight cases in which it has been tried—five by Esmarch and Oldekop, and three by himself. Two of the five were too far advanced for operation, and soon died; two others also died after several operations. The fifth—a simple cancer of the breast, which was also treated with liquor arsenicalis—was operated on without relapse. Beneke's own three cases were all alive at the last report. It would be easy to try the diet on a large scale either at the Cancer Hospital or in the cancer wards of the Middlesex Hospital, but, as Beneke insists, it must be strictly carried out, and the theoretical principles on which it is founded must be steadily kept in view by the surgeon in charge. To those patients who require more fat than is prescribed in the diet-table, and who cannot tolerate butter, cod's oil may be given. Those inclined to corpulence should take small doses of Carlsbad salts regularly during the "cure." In conclusion, Beneke points out that if, as is probable, the cancerous and the scrofulous diatheses are in many ways diametrically opposed to each other, what his dietetic system seeks is to reduce the former to the latter.

THE WEEK.

TOPICS OF THE DAY.

At the close of the first week following the anniversary of this year's Hospital Sunday in the metropolis, the amount received at the Mansion House is announced to have reached the sum of £20,500, or about £3000 in excess of the sum sent in during the corresponding period of last year. To a certain extent this may be regarded as satisfactory, but the experience of former years has shown that the great bulk of the collections is paid over in the first week, as they undoubtedly should be, and after that time the gross amount swells but slowly, and it remains to be seen whether the hitherto unreached total of £30,000 will be achieved in 1880. But, even if this should fortunately prove to be the case, the collection, as we have several times pointed out, is unworthy of comparison with similar contributions secured at

towns like Liverpool and Birmingham, more especially when it is remembered that the metropolitan area is made to extend to places as far off as Epsom, Chislehurst, and Beckenham, etc. Among the larger amounts paid in since our last notice are the following:—The Temple Church, £212 3s. 6d.; St. Margaret's, Westminster, £161 10s.; St. Andrew's, Well-street, £186 0s. 9d.; the City Temple, £105; Union Chapel, Islington, £134 5s.; St. Nicholas, Chislehurst, £190 18s. 1d.; St. Stephen's, South Kensington, £167 16s. 4d.; the Chapel Royal, St. James's, £84 11s. 9d.; St. Saviour's, Paddington, £71 7s. 3d.; St. George's, Bickley, £76 6s. 3d.; St. Matthew's, Upper Clapton, £84 4s. 3d.; Holy Trinity, Lee, £81 8s. 4d.; St. Barnabas, Kensington, £59; Colebrook-row Presbyterian Church, £50 6s.; St. Paul's, Beckenham, £81 9s. 7d.; St. Peter's, Vere-street, £73; Christ Church, Highbury, £86 11s. 1d.; Trinity Church, Marylebone, £70; Blackheath Congregational Church, £56; Trinity Church, Hampstead, £62 2s. 6d.; Greenwich Parish Church, £81 2s. 5d.; St. Paul's, Avenue-road, £86 15s. 8d.; St. Paul's, Onslow-square, £219; Wimbledon churches, £125; St. Stephen's, South Dulwich, £189; St. Mark's, Hamilton-terrace, £199; Holy Trinity, Paddington, £180; St. James's, Piccadilly, £211; St. Paul's, Knightsbridge, £191; St. Stephen's, Westbourne-park, £122; Quebec Chapel, £305; Christ Church, Paddington, £290; Holy Trinity, Sydenham, £121; Christ Church, Mayfair, £52; St. Pancras, £100; St. Peter, Bayswater, £100; All Saints', Knightsbridge, £153; St. Mary, Bryanstone-square, £73; St. Jude's, South Kensington, £389; St. Paul's, Wilton-place, £191; Brompton Church and Chapel, £150; St. James's, Paddington, £159. The account published on Tuesday morning last gives the total amount then received as a little over £23,000.

The Select Committee appointed by the House of Commons "to inquire and report as to the expediency of acquiring, on behalf of the inhabitants of London, the undertakings of the existing metropolitan water companies," has commenced its labours, the Home Secretary having been elected chairman. The array of counsel employed leaves little to be desired in the way of legal assistance, the Corporation of London being represented by Mr. Michael, Q.C., Mr. Lumley Smith, Q.C., Mr. O'Hara, and Mr. Mortimer; the Metropolitan Board of Works by Mr. Philbrick, Q.C., Mr. Pembroke Stephens, and Mr. Bazalgette; the Associated Water Companies by Sir Edmund Beckett, Q.C., Mr. Venables, Q.C., Mr. John Clerk, Q.C., and Mr. G. P. Bidder, Q.C.; Mr. Pope, Q.C., and Mr. Littler, Q.C., appearing for the Kent Company. The first evidence taken was that of Mr. E. J. Smith, C.E., the gentleman charged by Sir Richard Cross with the work of considering the matter of the negotiations with the companies for the purchase of their works. His examination occupied the whole of the first two days' sittings, and he was closely interrogated as to the bases on which he had calculated the sums proposed to be paid to the companies for the relinquishment of their claims. The inquiry bids fair to be an exhaustive one.

At a recent meeting of the Statistical Society, Mr. R. Price Williams, M.I.C.E., read a paper on population in England and Wales. It was shown that the average decennial rate of increase in the last century was 4·98 per cent. The effects of the general adoption of steam-power in manufactories, and of improvements in machinery, were clearly indicated in the higher rates of increase which obtained in the decades 1760-70 and 1780-90—10·27 per cent. and 9·03 per cent. respectively. During the present century the highest decennial rise of population was in the ten years ending 1821, when it was 18·06 per cent. of the population, and the lowest in the ten years ending 1861, when it was 11·93 per cent. In the five decades from 1811 to 1861 there was a decrement in the rate of increase of population averaging 6·09 per cent. of the rate of increase. In the large towns (over 20,000 inhabitants) the largest increase was in the decade ending 1831, when it was 26·19 per cent., and the average decrement of increase since then was 7·43 per cent. The increase in towns of from 2000 to 20,000 inhabitants reached its highest (19 per cent.) in 1811-21, and the average decrement since then was 10 24 per cent. The rural districts also had their highest rate in the decade 1811-21, and their average decrement had been 10·55. The population of England and Wales at the next census is estimated by Mr. Williams at nearly 26,000,000, this result being attained by striking a mean between the average decrement and the results of estimating class decrements. According to Mr. Williams's calculations the population of London is not likely to increase at the enormous rate recently suggested in connexion with the question of the water-supply of the metropolis.

A second death which has occurred at the Farnborough Orphanage within the past two months was investigated before the local coroner last week, and resulted in a verdict of manslaughter against Hannah Pashley, the resident proprietress. In the former case, which was also the subject of a judicial inquiry, the jury found that death had been accelerated by the wilful neglect of Mrs. Pashley, and she was committed to take her trial on a charge of manslaughter. The evidence now produced went to show that the deceased, a boy aged twelve, was removed from the Home to the house of a Mr. Newall on the night previous to his death, by direction of Mrs. Pashley. Dr. E. J. Barker, of Aldershot, said he was called in to see the deceased, but he did not examine him, as he was not in a fit state; he complained of want of nourishment and medicine. On a post-mortem examination he found that death was caused by exhaustion, weakness, and acute inflammation of the right lung. He was very much surprised to hear that the child had not had medical treatment, and he had not a shadow of a doubt as to the death having been accelerated by the removal of the patient on the previous evening. These cases afford additional proof of the necessity which exists for placing charities of this description under State inspection. The majority of them are undoubtedly well and properly conducted, and while these could put forward no objection, carelessness and neglect, whether wilful or otherwise, would be efficiently checked.

The report has recently been issued, giving the results of the inquiries conducted by Professor de Chaumont, of the Army Medical School, at the Royal Victoria Hospital, Netley, as to the relative efficacy of materials used in filters. The object was to ascertain what materials were most suited for use by the Admiralty and the War Office. Animal charcoal, carferal (a mixture of carbon, iron, and alumina), silicated carbon, and spongy iron were tested in several series of experiments, and the results obtained are given in many columns of figures. Out of the fifteen series of experiments, carferal established its superiority in thirteen, and silicated carbon in two. The adoption of carferal was recommended, though the exact proportions of the mixture were not decided upon.

There is no doubt that the Committee of the Home Hospitals Association have had many and serious difficulties to contend against, but the prolonged delay in commencing operations has been an unfortunate circumstance for the ultimate success of the undertaking. It is now stated that the first hospital will be open to the public on the 28th inst. This building, to be called Fitzroy House, is a large house on the north side of Fitzroy-square, which has been fitted in the most complete manner for the purpose it is intended to fulfil, combining with the neatness and cleanliness of the large

public hospitals the additional luxuries and requirements suited to the class of patients it is intended to receive. The entire surface of the walls of the rooms, from top to bottom, is varnished, to enable them to be thoroughly cleansed by washing. Great care and attention have also been given to the entire drainage system, which has been remodelled and improved in accordance with the latest sanitary rules. The stables attached to the house have been converted into nurses' rooms, so that the whole body of the house, with the exception of the apartments specially reserved for the use of the lady superintendent, will be available for the accommodation of patients. That a great want will thus in some degree be met must be readily admitted, and it will now remain to be seen whether the middle classes, for whom it is specially intended, will avail themselves of the advantages offered them.

One day last week, while Dr. Moore, the medical officer for the county gaol of Preston, was making his customary visit to the prisoners, he was savagely attacked by one of them, who struck him on the head with a hammer, inflicting a severe scalp-wound. The man had repeatedly complained of being ill, but Dr. Moore on every occasion failed to discover anything the matter with him. Although seriously wounded, Dr. Moore seized his assailant by the throat, and succeeded in holding him until the arrival of some of the warders, when the man was securely confined. A few days later, Dr. Moore was reported to be in a dangerous condition from the effects of the injury he had received.

Dr. Davies, the Medical Officer of Health for Bristol, at a meeting of the Sanitary Committee of that city, held last week, in reporting a case of small-pox, said he viewed with grave apprehension the proposed relaxation of the penal sections of the Vaccination Act by the Local Government Board. By the careful and judicious enforcement of the Act small-pox had nearly been obliterated in Bristol, but, should the proposed alteration take effect, he anticipated a considerable extension of the disease.

At the last week's meeting of the Metropolitan Board of Works, a report was presented by the Works Committee, stating that they had made arrangements for the purchase of the estate and interest of the Lord of the Manor of Hackney Downs, Hackney Common, Stoke Newington Common, Clapton Common, and certain parcels of waste land at or near Dalston-lane, for the sum of £33,000, which, in their judgment, was an advantageous settlement. The report was ordered to be received and adopted.

THE ELECTION ON THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS.

Mr. Reginald Harrison has addressed a letter to the 172 Fellows of the Royal College of Surgeons who signed the memorial that induced him to come forward for election into the Council, stating that, after mature consideration, he has decided to ask that his name shall be withdrawn from the list of candidates on the present occasion. He says that he has been chiefly prompted to take this step by the desire to avoid placing himself in antagonism with interests which, together with other Fellows of the College, he has long endeavoured to maintain in the selection of representatives in the Council. It is rumoured, as we go to press, that it is considered likely that one of the metropolitan candidates will also retire from the contest.

THE ROYAL UNIVERSITY OF IRELAND.

The Senate of the new Irish University met for the first time on Thursday, the 24th inst., under the presidency of his Grace the Duke of Abercorn, K.G., Chancellor of the University.

GUY'S HOSPITAL.

Things are no better at Guy's, and will probably be worse before they are better. The students have hissed the Treasurer, and, in polite language, pointed to the Matron as by implication a liar. Their statement we cannot in the meantime publish; the charges in it are of too damning a character to deal with until they have been disposed of in a court of law or elsewhere. But it is quite plain that matters have got to that state of tension that some explosion must be looked for. Surely it is a pity that a great school like Guy's should be in danger of ruin through the self-willed obstinacy of two individuals, neither of them the brightest specimens that this world has heretofore produced.

We have just received the following note on the subject:—The *Times* of the 24th contained a note from two members of Parliament, excusing their absence from the House on the previous day by the fact that they had to attend, as governors, "the important meeting at Guy's Hospital." That meeting—most probably one of great importance to the future of Guy's Hospital and School—was called together chiefly, we understand, because Lord Cardwell has resigned the presidency of the Hospital; and it is said that one of the reasons he gave for so doing was his want of confidence in the financial management of the charity. This point in the general mismanagement of the Hospital we have drawn attention to on a former occasion, and now that it is recognised, in such a way, by the President of the institution, the consequence should be the retirement of the responsible officer. It is rumoured that the behaviour of the students of the Hospital towards the Treasurer, last week, will be considered. It should, indeed, be taken into consideration as a most pregnant proof of the Treasurer's misrule. Students in mass do not show hostility to an eminent officer of their *Alma Mater* without very strong reason; and it must be remembered that the present state of things at Guy's injures the prosperity and success of the school.

INTERNATIONAL CONGRESS OF HYGIENE AT TURIN.

The International Congress of Hygiene at Turin will be opened on the 6th of September, and will close on the 12th. His Majesty the King of Italy, the Ministers, the Maire, the Prefect, and all the Court officials, will take part in the proceedings, and the Minister of Foreign Affairs invites all foreign governments to send delegates. The railway companies offer special facilities and advantages, in the shape of a reduction in fares to the extent of 30 per cent.

ST. THOMAS'S HOSPITAL.

We elsewhere publish the draft order of the Charity Commissioners with regard to pay-patients at St. Thomas's Hospital. In itself it constitutes one of the most bitter satires which could be devised on the mismanagement of the funds of a great institution in a great measure wasted to gratify the ambition of a respectable cheesemonger. It will be seen, however, that the Commissioners do not grant the power of receiving pay-patients in perpetuity, or, as the Hospital authorities modestly put it, "so long as the governors shall think fit," but have limited it to a term of ten years. Let us hope that by the end of that time the finances of St. Thomas's Hospital shall have so far recovered that they may be able to dispense with pay-patients.

THE EPIDEMIOLOGICAL SOCIETY.

We regret to have to postpone our report of the recent discussion at this Society, on the subject of Enteric Fever in Subtropical Climates.

MEDICAL PARLIAMENTARY AFFAIRS.

The Census.—In the House of Commons, on Thursday, June 17, Mr. Gladstone, in reply to Mr. Hubbard, said he could not promise a time when the Census Bill would be brought before the House. The Government intended to follow the course which had been pursued on previous occasions.

Condemned Meat.—Mr. Shaw-Lefevre, in reply to Mr. Anderson, said that no meat unfit for food is now sold by the Admiralty in open market. All beef and pork condemned as unfit for food is sold to a soap-maker, under a guarantee to melt it down. There is no reason to think that it finds its way to the mercantile marine.

Army Medical Officers.—Mr. Childers, in reply to Mr. Meldon, said that exchanges in this branch of the service would continue as they were before the department was reorganised. He could not trace any promise having been given by his predecessor to make the same regulations as for the rest of the service.

Fever in Ireland.—On Monday, June 21, Mr. Forster, in replying to Mr. Sullivan, said that a few days ago he heard of the existence of fever in the county of Mayo, which, it was thought, originated in the workhouse. It appeared probable that it was typhus fever rather than famine fever. He had telegraphed to the authorities that every attention should be paid to the sufferers. Mr. Parnell proposed to move that £100,000 of the Irish Church surplus be allocated for the immediate relief of distress in Ireland.

THE CHARITY COMMISSIONERS AND ST. THOMAS'S HOSPITAL.

Whereas the above-mentioned Hospital was founded and endowed, and, together with its endowments, is now held in trust for the purposes of the gratuitous reception, maintenance, and treatment therein of the poor:

And whereas it has been represented to the Board of Charity Commissioners for England and Wales, by the governors of the said Hospital, that the annual income thereof is, in consequence of an annual charge imposed thereon for the extinction within a limited time of a certain debt incurred by the said governors, in the erection of new hospital buildings, at present insufficient for the gratuitous maintenance and treatment in the Hospital, in accordance with the trusts affecting the same, of the full number of patients which can be accommodated therein, and that consequently certain of the wards in the said Hospital have for some time past been and are now closed and unoccupied:

And whereas it is desirable that steps should be taken to enable the governors to use the amount of accommodation in the Hospital, which is represented by the capacity of the said unoccupied wards, in a manner which shall not be inconsistent with the said general purposes of the Hospital, and which shall promote the increase of the income of the Hospital so as to facilitate the re-appropriation of the said vacant wards to purposes in accordance with the trusts of the Hospital and its endowments:

And whereas the governors have further represented to the said Board that the objects aforesaid may be most readily obtained by the reception into the said Hospital of patients upon terms of payment for the benefits derivable from their treatment therein:

And whereas, on the 20th day of February, 1880, the said governors made to the said Board an application in writing, under their common seal, for the purposes of the following order:—

Now the said Board do hereby order and direct by way of scheme, for the regulation and administration of the said Hospital, as follows:—

1. During a period of ten years from the date hereof, the governors may admit into the Hospital, and may provide for the maintenance and treatment therein of patients, in consideration of payment at a daily rate, as follows:—(*a*) A number of patients not exceeding thirty-seven,(a) at a daily rate of not less than 8s.; (*b*) a number of patients not exceeding fifty-two, at a daily rate of not less than 3s.

2. The governors may expend a sum not exceeding £500 out of the income of the Hospital, in providing any fittings and furniture which may be necessary for the reception of the said patients.

3. The governors may make rules and regulations, not being inconsistent with this order, for the admission, maintenance, treatment, and discharge of the said patients.

4. The period hereinbefore limited for the admission of the said patients may be extended, and the number of, and rates of payment to be made by, the said patients, may be varied from time to time by the governors with the sanction of the said Board.

(a) Should be forty-one.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

The following is the report from the Board and the Court of Examiners of the number of candidates who have presented themselves for the Primary and Pass Examinations for the diploma of Member of the College during the collegiate year 1879-80, showing the numbers of those who have passed and of those who have been rejected from each medical school during that period:—

Primary Examinations.

Medical School.	Totals.	Number passed.	Number rejected.
St. Bartholomew's	163·75	99·75	64
Guy's	100·50	75·50	25
University College	95·25	59·75	35·50
St. Thomas's	48·50	24·50	24
King's College	53	33	20
London	43·75	31·75	12
Charing-cross	37·50	29·50	8
St. George's	35·50	29·50	6
St. Mary's	28	21	7
Middlesex	27	21·50	5·50
Westminster	15·50	10	5·50
Manchester	36·50	30·50	6
Leeds	29	19·50	9·50
Cambridge	22·50	16·50	6
Birmingham	17·25	9·25	8
Newcastle-on-Tyne	16·50	10·50	6
Bristol	14	7	7
Sheffield	14	6	8
Liverpool	12·50	9	3·50
Dublin	6·50	4	2·50
Galway	3	1	2
Cork	2·50	2	·50
Belfast	0	—	—
Edinburgh	37	26·50	10·50
Glasgow	11·50	8	3·50
Aberdeen	6·50	6	·50
Kingston, Canada	3	3	—
Toronto	2	2	—
Montreal	2	2	—
Philadelphia	1	1	—
Ontario	1	1	—
Ohio	·50	·50	—
Bombay	3	3	—
Melbourne	2	2	—
Würzburg	1·50	·50	1
Seville	1	—	1
Malta	1·50	·50	1
Totals	896	607	289

Pass Examinations.

St. Bartholomew's	105·3	77·50	27·83
University College	76·83	48·3	28·50
Guy's	74	50·50	23·50
St. George's	39	32	7
St. Thomas's	33	22	11
King's College	31	19	12
London	27·50	16·50	11
St. Mary's	27	18	9
Middlesex	17	12·50	4·50
Westminster	13	6	7
Charing-cross	11·83	6·3	5·50
Manchester	30	18·50	11·50
Birmingham	19	8	11

Medical School.	Totals.	Number passed.	Number rejected.
Leeds	17	10	7
Liverpool	11·50	6	5·50
Newcastle-on-Tyne	10	3	7
Bristol	9·50	8	1·50
Cambridge	8	7	1
Sheffield	2·50	1·50	1
Hull	2	1	1
Dublin	3·83	1·83	3
Belfast	3·50	2·50	1
Cork	1	—	1
Galway	1	1	—
Edinburgh	8·50	6	2·50
Aberdeen	4	1·50	2·50
Bombay	3	2	1
Bengal	1	1	—
Madras	·50	·50	—
Kingston, Canada	3·50	2·50	1
McGill	2·50	2·50	—
Toronto	2	1	1
Colombia	·83	—	·83
New York	·50	·50	—
Pennsylvania	·50	·50	—
Melbourne	1	1	—
Berlin	·50	·50	—
Würzburg	·50	·50	—
Paris	·83	—	·83
Totals	605	397	208

Note.—In the above list, candidates who are indicated by a fraction have received their education at more than one school of medicine.

THE DIAGNOSIS OF TUMOURS OF THE MAMMARY GLAND.(a)

(*Continued from page* 674.)

In the differential diagnosis of the cancerous and so-called benign neoplasms the deductions based upon the study of their etiology are, as I have already pointed out, for the most part, without value. Hereditary predisposition, when it can be traced, is an antecedent which favours the idea of carcinoma; but it must not be forgotten that the most innocent formation, as in the case of a retention cyst, occurring in a lady, forty-three years of age, who was recently under my charge, not infrequently occurs in the daughter of a cancerous mother. So, too, the development of a tumour after the age of forty out of an induration left by puerperal mastitis, points to cancer, as that condition antedated 8·21 per cent. of the carcinomatous, and only 1·44 per cent. of the non-carcinomatous growths.

Age, as an indication of the anatomical arrangement of the component tissues of the mamma, is, as I have previously shown, so important an aid in the diagnosis that a neoplasm occurring before the twentieth year may safely be pronounced to belong to the non-carcinomatous group, while the chances in favour of carcinoma are as twelve to one after the age of forty. To be more exact, I have framed the following conclusions in regard to the structural development of the mamma, as manifested by the age of the patients, and the development of its neoplasms:—

First. During the rudimentary condition of the organ almost the only growth met with is fibroma.

Secondly. When the glandular structure is being evolved, after the appearance of the menses, and the connective tissue is still in excess, fibroma and fibrous sarcoma are the most common growths.

Thirdly. At the epoch of, and after, the first pregnancy—that is, between twenty and thirty years, when the glandular structure is perfected and the connective tissue is vascular, succulent, and rich in cells, fibromata, and small round-celled or small spindle-celled sarcomata, which are equivalent to medullary sarcomata, are to be anticipated.

Fourthly. From the thirtieth to the fortieth year, or during the stage of passive maturity, cystic sarcomata and cystic fibromata are most frequently met with, and true adenoma is also most common.

Lastly. During the period of involution, when the lacteal glands are disappearing, and the connective and adipose tissues are becoming abundant, myxoma and carcinoma make their appearance.

Of the symptoms themselves, valuable information is to be derived from the consistence, dimensions, isolation, and mobility of the growth, as well as the condition of the skin, nipple, subcutaneous veins, and the associated glands. As the majority of these signs have been sufficiently dwelt upon in the preceding table, I will only direct attention to those which are the most important.

In the non-carcinomatous tumours, the skin, while it may be thinned, stretched, and discoloured, or somewhat adherent, is rarely invaded by cell infiltration, and is never the seat of distinct nodules or tubers. In carcinoma, on the other hand, its infiltration by advancing epithelial cells gives rise to a hard, brawny condition, which is very characteristic, or to extensive adhesion, or discolouration, or to distinct tubers, and it is not infrequently pervaded by beaded or varicose lymphatics, which, so far as I know, are never seen in the opposite class of tumours.

While ulceration is less frequent in the non-carcinomatous than in the carcinomatous growths, it also arises in a very different way, and has certain peculiarities which are distinctive. Thus, it is the almost invariable result of limited gangrene of the thinned and stretched, but not infiltrated skin; while its edges are smooth, soft, and sometimes elevated upon the fungus which protrudes through, without being attached to, it. Such an appearance is peculiar to the non-carcinomatous growths, and is of itself quite sufficient to exclude the idea of carcinoma.

The nipple is permanently retracted in more than one-half of the cases of carcinoma, while it is sunken, by the protrusion of the tumour beyond its level, in only one out of every twenty of the non-carcinomatous neoplasms. This contrast is most striking, but it is not more so than one might expect, when the contracting nature of carcinoma is borne in mind. When, in addition to the retraction, the mamilla is also fixed and indurated, these conditions may almost be regarded as pathognomonic of carcinoma. Discharge from the nipple merely indicates that the glandular structure is involved, either primarily or secondarily, and that one or more of the ducts leading from the secreting lobules are permeable. When it antedates the detection of a tumour, there is every probability that the growth is an adenoma. If the neoplasm has a solid and hard feel, it is probably a carcinoma, since a discharge is only met with in the cystic non-carcinomatous tumours.

Fixation, or adhesion to the walls of the chest, is a valuable symptom of carcinoma, inasmuch as it is ten times more frequent, and far more extensive, than in the opposite class of growths.

Of all the signs, there is none which is so valuable in the differentiation as the state of those lymphatic glands which are in anatomical connexion with the breast. Thus, in every one hundred cases of carcinoma, when the patient first comes under observation the axillary glands will be found to be enlarged and indurated in sixty-four, and in nearly one-third of these the glands above the clavicle will also be contaminated. Of the non-carcinomatous tumours, on the other hand, out of every one hundred cases in only three are the axillary glands enlarged, while they are never densely hard. The glands above the clavicle are never implicated.

The diagnosis of the non-carcinomatous neoplasms is based, therefore, upon their occurrence in one case out of every six and two-thirds before the age of twenty; their greatest frequency before the fortieth year; their multiplicity in one breast; their circumscribed, rounded or ovoid, and bossed outline; the firm consistence of the smaller and the unequal feel of the larger; their mobility in or on the breast and the adjacent tissues; their comparatively rapid growth and large volume; the almost normal appearance of the skin; the enlargement of the superficial veins when they are bulky; their tendency to ulcerate and fungate late in the disease; and the absence of adhesions between the protrusion and the circular and, as it were, punched-out margins of the ulcer; and, finally, their freedom from a history of hereditary predisposition, retraction of the nipple, and enlargement of the associated lymphatic glands.

(a) An extract from the forthcoming work by Samuel W. Gross, M.D., published in the *New York Medical Journal* for June.

The points in favour of carcinoma are a history of heredity; non-development before the twentieth year; greatest frequency after the fortieth year; irregular, knobby outline; uniformly densely hard consistence; immobility in the breast; relatively small volume and slow growth; retraction of the nipple; enlargement and induration of the lymphatic glands; invasion of the skin; fixation to the pectoral muscle or walls of the chest; limited ulceration, late in the disease, without any tendency to fungous protrusion; and the thickened, indurated, and everted edges of the ulcer.

The gross anatomical characters of these two classes of neoplasms are sufficiently characteristic for diagnostic purposes. The carcinomatous are not surrounded by a limiting capsule, so that their attachments are so close that they are with difficulty freed from the adjacent skin, fat, fasciæ, and muscles. On section, they are firm, crisp, tough, and often creak under the knife. Their cut surfaces assume a concave appearance, are not lobed or cystic, and cannot be torn into small bundles; and their greyish basis is traversed by minute points of fat or by yellow lines, which represent the remains of ducts with their contents in a state of fatty degeneration. They are also frequently pervaded by glistening white fibrous bands, so as to look like the section of an unripe pear, and a pultaceous, milky fluid exudes from them on pressure or scraping.

The non-carcinomatous neoplasms are surrounded by a fibrous capsule, through which they can readily be detached from the surrounding tissues. Although they may be tough, they rarely creak on section, and their divided surfaces are plane, or they may even be prominent, and are never concave. Many, and particularly the sarcomata, have a fibrous tear, which is very characteristic, and not a few are lobed. They are not streaked by yellowish lines, nor do they contain pellets of fat. They are, moreover, frequently the seat of dilated ducts and vegetations, and exude a serous fluid on pressure. An open-mouthed duct, or a small cyst or two, may be found in carcinoma, but they are, with very rare exceptions, free from vegetations. On the whole, the presence of a limiting capsule and of enlarged ducts and vegetations, and the absence of fat and concavity on section, are quite sufficient to distinguish the non-carcinomatous from the carcinomatous tumours.

Having convinced himself of the non-carcinomatous nature of the neoplasm, the surgeon has still before him the solution of the problem as to whether it is solid or cystic. Although the latter merely represents a further stage of evolution of the former, there are some important points of difference between them which render their differentiation comparatively easy.

NON-CARCINOMATOUS NEOPLASMS.

Solid Form.	Cystic Form.
Age of Occurrence.	
Developes, on on average, at the thirty-first year. 8 per cent. appear before the age of sixteen; 56 per cent. originate during the period of the perfection of the mamma; and 36 per cent. are observed during its functional decline.	Appears, on an average, at the thirty-fifth year. 1·75 per cent. occur before the sixteenth year; 38 per cent. develope between sixteen and forty years; and 60 per cent. are witnessed after the age of forty.
Consistence.	
Equable, whether they be firm or soft.	Variable or unequal, being firm at some points, and soft or fluctuating at others.
Volume and Rate of Growth.	
Increases slowly, and rarely attains a considerable bulk.	Grows quite rapidly, and sometimes acquires enormous dimensions.
Condition of the Skin.	
The skin is discoloured in 9·83 per cent., and adherent in 8·19 per cent., of all instances.	The skin is discoloured in 26·02 per cent., and adherent in 16·43 per cent. of all cases.
Superficial Veins.	
The subcutaneous veins are enlarged in 4·91 per cent. of all cases.	The superficial veins are enlarged in 17·80 per cent. of all cases.
State of the Nipple.	
The nipple is buried or sunken in 1·63 per cent. of all examples.	The mamilla is depressed or sunken in 8·21 per cent. of all instances.
Discharge from the Nipple.	
Discharge from the nipple is unknown.	The nipple discharges in 16·43 per cent. of all cases.
Fixation to the Chest.	
The tumour is always mobile on the chest.	The growth is attached to the pectoral muscle or ribs in 4·10 per cent. of all instances.
Ulceration.	
Spontaneous ulceration occurs in 6·55 per cent. of all cases.	Spontaneous ulceration is met with, and generally with fungous protrusion, in 24·63 per cent. of all cases.
Lymphatic Glands.	
The glands of the axilla are enlarged in 1·63 per cent. of all examples.	The axillary glands are enlarged in 4·10 per cent. of all cases.

From the preceding analysis it will be seen that the solid tumours present themselves simply as circumscribed growths, which have an equable consistence, grow slowly, are of moderate volume, and are not characterised by alterations in the associated or contiguous structures. The cystic neoplasms, on the other hand, have a variable consistence, grow rapidly, and attain a large volume, and are quite liable to changes in the skin, prominence of the subcutaneous veins, limited superficial adhesions, spontaneous ulceration and fungous protrusion, and a discharge from the nipple. When the mamilla is deformed, the tumour is partially fixed to the chest, and the lymphatic glands are swollen. All of these signs are far more frequent in the cystic than in the solid form. The preceding phenomena, however, do not occur with equal frequency in the different solid and cystic growths, as is set forth in the following statement, which affords important clues to their differential diagnosis:—

Solid.

	Fibroma.	Sarcoma.	Myxoma.	Adenoma.
Average age of development...	23 years	37 years	45 years	16 years
The skin is discoloured in ...	None	16 p. c.	40 p. c.	None
The veins are enlarged in ...	„	8 „	20 „	„
The nipple is deformed in ...	„	None	20 „	„
Discharge from the nipple in...	„	„	None	„
Superficial adhesions in	„	12 p. c.	20 p. c.	„
Deep adhesions in	„	None	None	„
Ulceration in	„	12 p. c.	20 p. c.	„
Axillary glands enlarged in ...	„	None	20 „	„

Cystic.

	Fibroma.	Sarcoma.	Myxoma.	Adenoma.
Average age of development...	36 years	33 years	48 years	35 years
The skin is discoloured in ...	10 p. c.	34·28 p.c.	33·33 p. c.	26·66 p. c.
The veins are enlarged in ...	15 „	25·71 „	None	6·67 „
The nipple is deformed in ...	10 „	5·71 „	„	13·33 „
Discharge from the nipple in...	15 „	14·28 „	„	26·66 „
Superficial adhesions in	10 „	8·57 „	33·33 p. c.	40·00 „
Deep adhesions in	10 „	2·85 „	None	None
Ulceration in	10 „	31·42 „	33·33 p. c.	26·66 p. c.
Axillary glands enlarged in ...	None	2·85 „	None	13·33 „

In the discrimination between the solid and cystic growths invaluable aid may be derived from the exploring needle or a slight puncture. In the event of the tumour being solid, nothing, save, perhaps, a little blood, comes away; whereas, if it be cystic, the discharge of its watery or sanguinolent contents will tend to diminish its volume very materially, and it may even be possible to feel the solid vegetations which have been obscured by the presence of the fluid. From simple cysts of the mamma the diagnosis rests upon the fact that the cystic neoplasms do not entirely disappear after the evacuation of the cavities; while from chronic abscess, which not infrequently simulates a cystic growth, the distinction is based upon a drop of pus following the withdrawal of the exploring needle.

The differential diagnosis of the varieties of carcinoma

may be determined by attention to their contrasts and affinities, which are set forth in the subjoined table:—

	Scirrhous.	Medullary	Colloid.	Atrophying.
Average age...	48 years	50 years	45 years	47 years
Consistence	Never soft	Soft in 66 p. c.	Partly soft in 7·69 p.c.	Never soft
Veins prominent...	2·08 p. c.	9·09 p. c.	23·07 p. c.	0 p. c.
Nipple retracted...	52 „	33·33 „	30·72 „	100 „
„ discharging	9 „	0 „	15·38 „	0 „
Glands infected	64·23 „	59·02 „	23 07 „	52·94 „
Skin adherent	34·54 „	52·92 „	23·07 „	58·82 „
Nodules in skin	10·61 „	5·88 „	7·69 „	17·64 „
Ulceration	23·77 „	18·18 „	15·38 „	41·17 „
Fixation to chest	21·58 „	29·41 „	15·38 „	35·29 „
Nodules in pectoral muscle	7·03 „	11·76 „	15·38 „	57·14 „
Both mammæ	3·65 „	9·09 „	15·38 „	5·88 „

(*To be continued.*)

FROM ABROAD.

Hæmophilia.

Dr. Zielewicz, of Posen, relates in the *Centralblatt für Chirurgie*, for April 17, the following interesting case:—An anæmic lad, eleven years of age, was brought into the Children's Hospital on January 2, on account of an injury to the right knee, caused about a month before by a fall. He continued to go to school after the accident, until the increasing pain and swelling obliged him to be confined to bed. The circumference of the knee was thirty-five centimetres, that of the left being twenty-seven, and the patella was almost immovable. There was slight contraction of the knee, and the muscular substance of this limb was feebler than that of the other. On examination, under anæsthetics, only an indistinct fluctuation could be perceived, the sensation conveyed being almost that of a doughy substance. By means of a Pravaz's syringe, some clear fluid blood was withdrawn. The joint was firmly inclosed in a plaster-of-Paris bandage, which caused no pain whatever. On January 19 this was removed, and almost immediately there was produced in the knee, which during the treatment had continued unchanged, such dreadful pain that the hitherto apathetic and patient child tossed about the bed like one mad. The tongue was dry, and the temperature in the evening was 37·7° C. In spite of morphia injections, and painting the joint with iodoform, the condition of things remained much the same until the 21st. The knee now measured thirty-three centimetres, and was very painful to the touch. The boy was very restless, with a temperature of 38·3° C. Button-hole apertures were now made, under carbolic acid spray, at the lowest part of the joint, on each side of the patella; and blood spouting out of the openings, irrigations with acetate of alumina were resorted to, with the apparent effect of arresting the bleeding. On the finger being introduced, it was ascertained that the joint was filled with coagulated blood, which adhered pretty firmly to the capsule. In order to facilitate the removal of the coagula from the upper portion of the joint, an aperture was made there also; and elastic drainage-tubes having been introduced, active irrigation with the acetate was kept up until the joint had become entirely freed of coagula, and the bleeding, which during the operation had continued to diminish, only continued trickling from one of the lateral openings. A compressing bandage was then applied. Called to the patient two hours afterwards, the reporter found him and the bed inundated with blood, alarming collapse having set in. On the removal of the bandage, the entire joint, drainage-tubes, and apertures were filled with coagulated blood, fluid blood also trickling away. Digital compression of the femoral artery and various other means were tried in vain, the boy dying twenty hours after the operation. On examination after death, the joint was found filled with loose coagula, in part floating in fluid blood, and in part adhering to the walls of the capsule. The ligaments were uninjured, and no laceration of the capsule had taken place. The popliteal vessels were in an entirely normal condition. Although no anatomical cause of death was here discoverable, it was afterwards ascertained that the boy had formerly bled for three weeks after having had a tooth drawn, and had never been properly himself since. The peculiarity of the case consisted, therefore, in the occurrence of a traumatic injury to the joint in a subject of constitutional hæmorrhage. This condition of hæmophilia explains how it was that this effusion of blood existed without either undergoing absorption or giving rise to suppuration.

After relating to the Vienna Doctoren-Collegium (*Allg. Wien. Med. Zeit.*, April 13) some cases of hæmophilia which had occurred in his practice, Dr. Hertzka adverted to the principal facts connected with this disease. The Germanic race, it would seem, is especially liable to it, for while, in 219 families disposed to hæmophilia mentioned by Immerman, 119 belonged to England, Germany, or North America, only 50 were French, Russians, Swedes, etc.; and no case is known to have occurred in Italy. Jewish families seem to be especially liable to it. It is a general congenital diathesis, which may or may not be hereditary, occurring very much more frequently in males than in females, so that of 650 cases 602 were males and 48 females. But the female members of bleeding families, even when they are not "bleeders" themselves, are more dangerous, because they keep up the hereditary disposition; while in the men of such families who have not been bleeders this hardly ever occurs. The first hæmorrhage is observed during the first or second year in about 70 per cent. of the whole number; and although hæmorrhage may occur later, it has never been met with in a well-marked case of hæmophilia for the first time after the twenty-second year. Rudimentary forms of the disease may occur at a later period. The fertility of bleeding families is great, so that Grandidier counted 442 children in forty-five families, and Wachsmuth 114 in twelve families. The affection is usually hereditary, and its subjects are generally fair with blue eyes, having a delicate, pale skin. The bleeding in hæmophilia may be either traumatic or spontaneous; and both of these may be either superficial or interstitial. In the traumatic cases the bleeding usually, but not always, immediately succeeds the injury; and in one case, in which the external skin, to all appearance, was uninjured, violent hæmorrhage occurred in half an hour. Frequently the slightest injuries give rise to severe hæmorrhage, while large wounds are sometimes unattended with ill effects. Incision of the frænum linguæ has proved fatal, and the cases in which death has followed ritual circumcision are rather numerous; and even vaccination has been attended with serious hæmorrhage. Extraction of teeth has given rise to most dangerous bleeding; and Dr. Hertzka alludes to the case of a boy, whose brother had died in consequence of circumcision, and who bled for eight days after the extraction of a tooth. Spontaneous hæmophilia usually appears at a later period than the traumatic. Bleeding from the nasal membrane and the skin occupy the first place, the hæmorrhage under the skin varying in size from that of a pea to that of a man's hand. These extravasations usually soon disappear again. Bleeding from the stomach, intestinal canal, kidneys, and other organs, is of rarer occurrence. Pseudo-rheumatic pains and swellings of the joints are not an uncommon accompaniment of hæmophilia. The affection usually lasts for the life of the individual, and the duration of the different attacks varies from some hours to days, or even weeks. It usually proves fatal, for Grandidier, of 212 subjects of hæmophilia, found only 101 who had reached their eighth, and only twenty-four who had reached their twenty-second year. Instances, however, are known of their having reached their sixtieth year. The prognosis is more unfavourable the earlier the disease has appeared; and when a child has reached its eighth year, less uneasiness may be felt about it, although the danger of a recurrence of the hæmorrhage must never be underrated. Superficial bleeding is more unfavourable than interstitial, and internal is more dangerous than external. The prophylaxis is of importance, both with regard to preventing the production of new cases and to lessening the number of attacks in those who have exhibited the disposition. Thus, among the members of bleeding families, or when hæmophilia is suspected, all wounds, even the slightest, and injuries, and most especially tooth-drawing and circumcision, must be absolutely avoided; while in the anæmic, iodine, iron, and strengthening food should be habitually employed; and in the plethoric, cold applications, acetate of lead, and ergot. Alcohol, hot drinks, and excessive bodily exertion are mischievous. In treating these cases the hæmorrhage must be arrested as soon as

*

possible, rejecting the advice of those who recommend that in the plethoric time should be given for the pulse to diminish in force. Seeing the difficulty there so often is in staying the blood, any delay, especially in children, is most dangerous.

REVIEWS.

Aids to Physiology, specially designed for Students preparing for Examination. By B. Thompson Lowne, F.R.C.S. Eng., Examiner in Physiology, and Arris and Gale Lecturer on Physiology, Royal College of Surgeons of England; Lecturer on Physiology, Middlesex Hospital. London: Baillière, Tindall, and Cox. Pp. 104.

The production which now lies before us would little deserve notice at our hands were it not for its title-page. But when a man who signs himself Examiner in and Lecturer on Physiology at the Royal College of Surgeons makes bold to put his name to a book of this kind, it becomes necessary to inquire into the nature of its contents. To dispose of the whole of physiology, structural and functional, including a dive into embryology, not to mention a strong dash of anatomy, in 104 small and loosely printed pages, would be the task either of an ignoramus or of a genius of the first order—and we have no reason to suspect that Mr. Lowne is either the one or the other. Were it not for the title-page and the preface we should have supposed that these "Aids" had been composed for some young ladies' school, but it may be that, under the influence of some malevolent inspiration, the author devoted it to the "special" service of "students preparing for examination."

Nor is this all, for in the preface we are solemnly told that "the author thinks that the short descriptions of the structure and functions of the different organs will be easily comprehended by all students who have mastered Huxley's 'Elements.'" Well might Huxley exclaim with the persecuted gentleman in the play, "Ye gods! must I endure all this?" for to be thus patronised by the author of such a production as that with which we have now to deal must be a severe trial to even the meekest of philosophers. Yet he shares it in honest company,—Sir James Paget is likewise patted on the back. Nor is this all the comfort that the preface affords, for the student for whom these "Aids" are "specially" intended is gently warned that he "must not expect to acquire a sufficient knowledge of physiology from so short an epitome of the subject as the present little book affords." Absurdity could go no further. If any student were weak enough to suppose that he could acquire a sufficient knowledge of physiology from "the present little book," he would be more fit for Bedlam than for the College of Surgeons, and a good many of us would have spent our lives in vain in endeavouring to instil into men's minds the principles of common sense, which is to guide them in their professional career. But let us examine a little more closely the nature of these proffered "Aids."

To begin: it must be clearly understood that we are not about to quote every inaccurate or incoherent statement in these "Aids,"—if so, we should have to introduce passages from almost every page in the book; but, as our readers will presently see, such a step will hardly be necessary to illustrate the nature of its contents. Many passages we have marked in the course of a careful perusal of this work,—for we do not undertake lightly the task of reviewing, in the manner we are bound to do, the work of an Examiner and Lecturer at the Royal College of Surgeons; but justice to students, justice to the illustrious body with which the author is connected, still more, if we dare say so, justice to teachers, compels us to take up a subject which, to us, is most distasteful.

Premising, as aforesaid, that many points are passed over, we have at page 7, line 1, the following extraordinary statement:—"An animal may be justly compared to a machine to a certain extent, and of all artificial machines to a steam-engine. When a steam-engine works, two things are necessary, always presuming the mechanism is in order—first, a supply of fuel; and, secondly, a supply of air." This is evidently no joke, for the author proceeds to elaborate his illustration, entirely forgetting, apparently, that such a thing as water is required for a steam-engine. He concludes by saying, "It does not appear to the author that the animal exhibits as many points of similarity as differences when compared to an artificial machine." Well, if this artificial machine is to be a *steam*-engine, which goes with heat and air alone—water being out of the question,—we quite agree with him.

But we must now make another quotation from the author whose work is to be so easily mastered by those who have managed to understand Huxley's "Elements." It is sweetly simple in its tone:—"In a very young state every part of an animal consists entirely of protoplasm in minute spherical masses. These masses are called cells; they are so called because the older physiologists only knew of them when they had become altered by growth. As a rule, they become altered in the following manner:—First, they get a minute central harder particle called a nucleus. The nucleus generally contains one or two minute, bright-looking globules, called nucleoli. Next the cell is seen to contain numerous minute globules around the nucleus; these coalesce and form a drop of fluid. This is called the cell contents. The protoplasm then forms a wall—the cell wall—around the contents and nucleus. The wall usually becomes thickened and hardened, and so supports and protects the contents." If this is physiology for the College, some of us must alter our teaching. Some rude people have insisted that the leucocyte is the type we must go by, and we leave anyone who has got a microscope to verify the description above given with one of these bodies—as a rule, easily obtainable.

Next we pass to page 10, where we are assured that areolar tissue consists of fibres which, "when boiled, dissolve and become converted into gelatin." This statement is certainly curious, and deserves attention, for somehow or other we recollect passing through certain parts of this city, and seeing something they called "cowheel," where neither tendons nor connective tissue had disappeared. Nay, not even—as we are elsewhere assured by this author—had the "whole matrix of the cartilage dissolved entirely by boiling," as far as we could satisfy ourselves by visual examination.

We shall not delay here, but pass on to the subject of the blood. We are at once assured that "the substances which deoxidise hæmoglobin are such as are burnt in the body during life." Well, they may be *such*, but what are commonly employed for the purposes of demonstration, Stokes' fluid or yellow sulphide of ammonium, have little relation to the processes of life. But here we come upon an astounding statement (page 19)—"The red corpuscles have a higher specific gravity (1088) than the liquor sanguinis (1020)." Nobody would dispute the relative specific gravity of the two, but the absolute figures take us aback, for at page 22 we are told that the specific gravity of the blood is 1035—which, by the way, is as far wrong as the other estimate. But the joke lies in this: it is like a man estimating the specific gravity of Thames water, and including in the calculation the tonnage of all the ships lying in the London Docks. But even this is handicapped by the following statement, taken *verbatim et literatim* from these "Aids":—"Blood does not clot in the body except when the bloodvessels are injured. . . . Blood which escapes into cavities in the body does not generally clot, but remains fluid. . . . The blood does not clot in the body after death, except under exceptional circumstances." Could the man have ever seen the inside of a dead body who could write thus?

For sweetness and light, commend us to the following:—"If you take a piece of muscle from a frog immediately after it is dead, and then pass a current of electricity into it for a very small fraction of a second, the muscle will contract; if you repeat this at intervals of a second or rather less, the muscle will contract each time; and this is just what the heart will do if you leave it alone." If our grandmother had told us that whilst we were still in petticoats, it would have been matter of surprise and delight; but to come from a Professor at the College of Surgeons as a revelation to men of a certain stage of their student's career, and who have mastered Huxley, it must, we should think, be received with fear and trembling as a fact almost too great to be grasped and mastered.

Then, again, what think you, friends who work at teaching and training students for their high career, of the following excerpt?—"If the heart is kept at the right temperature after it is cut out of an animal, it beats as if in the body" (page 31).

It is a poor business, at the best, to be constantly finding fault, and we are heartily tired of it, especially as concerns

this book. Could we find a single redeeming feature in it we should be only too pleased to give it publicity, but we have, alas, failed to find even one. Actual error is combined with such a prodigious amount of loose statement that we are driven to the conclusion that the volume is both objectionable and unreliable. At page 36 we are told that "the pneumogastric nerve supplies the tissue of the lung, and any increase of the quantity of carbonic acid in the blood or in the lungs acts as a stimulus to the respiratory act." A looser statement could hardly be made. But in the second sentence after, we are told that "injury to the spinal cord above the origin of the phrenic nerves cuts off all the respiratory nerves." We wonder how this injury reaches the vagus!

On page 38 we are told that "nitrogenous foods are the various forms of albumens called proteids, because they all yield a chemical body called protein." The "Aids" are here wrong only in the definition, in etymology, and in facts—slight errors, perhaps, but having something of importance about them. Many people would hardly credit us with being in earnest did we not give *verbatim* quotations of some of the surprising statements we encounter. Thus, at page 42, we are assured that "the tongue consists of muscular tissue of the striated kind"; at page 43, that "the linguales alter the form of the tongue, and are *therefore* called intrinsic muscles" (the italics are ours). On the same page we are told that the pharynx "consists of the three constrictor muscles, which are red and striated." On page 45 we are told that "the mucous membrane (of the stomach) consists of closely packed tubular glands or follicles"; and on the same page we are given to infer that the sole muscles of mastication are the pterygoids.

On page 50 we encounter the astounding statement that "After death the gastric juice rapidly dissolves the coats of the stomach." Again we are driven to exclaim in wonder—Has the author of such a statement ever seen the inside of a dead body? What with blood which does not coagulate, and the heart that keeps moving after removal from the body, and the stomach which has been dissolved by its own juice, the body presenting such phenomena would be a fitting specimen, not perhaps for the Hunterian Museum, but certainly for the worthy Mr. Barnum's collection of curiosities. At page 58 we are told that the terminations of the hepatic duct "surround, but do not enter, the lobules" of the liver; at page 61, that the surface of the kidney, when stripped of its capsule, is naturally granular. At page 71 we are first informed that the spleen "consists of a tough, elastic, fibrous capsule, and is entirely surrounded by a peritoneal coat: next, that after all it has got something inside this fibrous coat; this is a "sponge-like tissue," the spaces within which "are filled with a grumous material of a dark red colour, called splenic pulp."

But we can go no further: quotation would be useless, criticism superfluous. The book is beneath contempt; let it await the fate it merits.

On Consumption, and its Treatment by the Hypophosphites. By John C. Thorowgood, M.D. Third edition. London: Baillière, Tindall, and Cox. 1880. Pp. 88.

The author, well known as a careful and hard-working physician and observer, thinks that as the hypophosphites of soda and lime have been made official in the British Pharmacopœia, there is now no further need of any special pleading for their recognition as remedies. We gather as the result of his experience that he does not claim for these drugs any specific anti-tubercular virtues, such as have been claimed by some writers; but he evidently believes that, when prescribed with certain restrictions and after careful examination of the patients with reference to possible hepatic or renal disease, they sometimes prove very beneficial.

The author inclines to the belief that consumption in many cases is due to nervous depression, and he was led to employ the hypophosphites, which, being rich in phosphorus, are consequently nerve tonics.

The book contains a long series of cases, in which the physical signs are briefly given and the treatment which was adopted. Unfortunately, most of the cases get lost sight of, and therefore one cannot judge what finally becomes of them. While under observation, however, many seemed to derive benefit, especially when the case was in an early stage.

GENERAL CORRESPONDENCE.

TYPHOID FEVER IN INDIA.

Letter from Surgeon-General C. A. Gordon.

[To the Editor of the Medical Times and Gazette.]

Sir,—According to the *Lancet* of this date, a serious outbreak of typhoid fever has occurred among the British troops at Delhi. The outbreak is of a mild type; malarial affections are somewhat numerous among the native community; and, so far, no local insanitary conditions have been discovered to account for the sudden appearance of that fever.

Would it not be of importance, with reference to the discussion now taking place on the subject of typhoid fever in India, were it stated definitely what is the precise sense in which the expression *typhoid* is applied to this outbreak of fever at Delhi? I am, &c., C. A. Gordon,

70, Cambridge-gardens, W., June 19. Surg.-Gen.

ON TESTING FOR SALICYLIC ACID IN THE URINE.

Letter from Dr. W. Squire.

[To the Editor of the Medical Times and Gazette.]

Sir,—In your leader of June 5, on salicylic acid in acute rheumatism, mention is made of the purple reaction in the urine by perchloride of iron during the administration of salicylic acid and the salicylates. This is clinically of such importance that you will permit me to offer one or two corrections. I have habitually used the test during the treatment of all such cases that have come under my care during the last three years, and in very many instances where the acid or any of its salts have been given for other objects. So far, I have not failed to obtain this reaction within three or four hours, even after the more insoluble combinations with iron or quinine have been used, and when only five grains of the acid have been taken. It is, therefore, evident that this reaction is no sign that the body is saturated with the acid, but merely that it is being excreted by the kidneys. When it is rapidly excreted the doses have to be given frequently; and in some stages of rheumatic fever it is excreted more rapidly than in other conditions. In one case of temporary amaurosis in rheumatic fever, reported by Dr. Francisco Gatti, frequent doses were given, even though no reaction in the urine had appeared; I prefer to wait for this reaction before repeating the medicine frequently. In one case, where albuminuria—a rare complication—appeared in the course of rheumatic fever, smaller doses of salicylate of soda only were required, as the acid was more slowly excreted, and a satisfactory result obtained with six fifteen-grain doses, all the acid not being excreted for twenty-four hours after the use of the salt had been stopped. I am, &c.,

June 23. W. Squire, M.D., F.R.C.P.

"THE CRUDITIES."

[To the Editor of the Medical Times and Gazette.]

Sir,—As a modest though somewhat ambitious man, perhaps you will allow me, through your widely circulated journal, to make known to the medical world two discoveries of mine.

Sir, I have after immense labour succeeded in discovering a disease, and, what is of more importance, its remedy. The disease in question is one specially afflicting scientific men of mark, and I have ventured to call it "The Crudities," from its objective symptoms. It consists in a violent, and, I am sorry to add, not always an unselfish, yearning after publicity, whereby the unfortunate patient will recklessly injure a good professional reputation in publishing, forsooth, a crude account of some *discovery*—alas! too soon to be *recovered* by oblivion.

The wide-spread prevalence of this disease is observable to the ordinary newspaper-reader in the notices he sees from time to time of electric candles that will not light, or predicted thunderstorms that cannot burst; but it is in the medical world that its ravages are most apparent. I am sorry that I cannot give an account of the pathology of the disease, as I have not yet succeeded in obtaining a dead

professor to dissect. I believe, however, that it will be found to be due to the presence of a nematoid worm in the tissues.

I now come to my second discovery, premising that the disease is due to the vagaries of some entozoon; and, knowing the retentive properties of wax, I made a series of careful experiments upon small animals and insects, to ascertain the holding powers exerted by different kinds of beeswax when applied to them. I came to the conclusion that the stickiest, gummiest, most adhesive holdfast ever invented was the product of some rare bees living in the wilds of Central Australia. This drug (of which my agents have purchased all the present available supply) is a certain and most effective cure for this intractable disease. I shall not trouble you with an elaborate record of cases benefited by the remedy, but shall only state that I took a bolus of it before writing this letter. I am, &c.,

June. BEESWAX.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

FRIDAY, MAY 28.

E. HEADLAM GREENHOW, M.D., F.R.S., President, in the Chair.

(*Concluded from page* 653.)

TWO CASES OF DISEASE OF THE MASTOID BONE, IN ONE OF WHICH A SEVERE ATTACK OF HERPES OF THE FACE FOLLOWED THROMBOSIS OF THE LATERAL SINUS AND JUGULAR VEIN.

MR. HENRY MORRIS said that the object of the following communication was to point out the value of trephining the mastoid bone as a palliative measure, even when recovery was not possible; to show the value of a simple incision through the soft tissues over the mastoid as a curative measure in cases of periostitis of that bone; and to put on record a case in which a severe attack of herpes of the face and mouth had been associated with thrombosis of the lateral sinus and internal jugular vein. *Case* 1: Alfred S., aged thirty-one, had for years suffered from deafness and a discharge from the left ear. Ten days before admission, on November 14, 1879, the discharge became more profuse and offensive; pain and redness over the squamous and mastoid bone of the same side, and shivering followed. On November 16 he suddenly lost consciousness, and his breathing became stertorous. Two hours later the mastoid was trephined, and some very stinking pus escaped. Immediately his pulse improved, the stertor ceased, and after a few hours he regained perfect consciousness; but on the following day symptoms of pyæmia were pronounced. On November 19 a few herpetic vesicles appeared on the right cheek and lips, which by the next day had spread over the greater part of the right side of the face, and to a less extent on the left side. Before his death, on November 27, the eruption on the face had become quite confluent, and had scabbed over. The throat, mouth, and tongue were also similarly affected. At the post-mortem the left lateral sinus and internal jugular, as low as the junction with the subclavian, were plugged with a firmly adherent discoloured clot, and there was also a thin clot in the longitudinal right lateral sinus and in the torcular Herophili. The author remarked that trephining in this case not only prolonged life and restored consciousness for some days, but it entirely removed the agonising pain suffered for several days before. The herpes might possibly be explained on the hypothesis of active venous congestion, resulting from the blocking of the lateral sinus and the extension of the thrombus along the whole course of the jugular vein. It was, however, admitted that it was quite impossible to deny the neurotic origin of the eruption, and it was even suggested that the congested state of the vessels might have given rise to nerve irritation by direct pressure. Another fact requiring notice was the tendency in this patient to capillary congestion of the face and neck, as indicated by a temporary deep red rash, which latterly had been always produced by taking the smallest quantity of stimulants. Arguments against the venous congestion theory were advanced, such as were offered by the absence of any similar eruption in recorded cases in which the internal jugular had been compressed or ligatured, or even in cases in which the superior vena cava itself had been occluded; but it was pointed out that there was an important difference in the effect upon the circulation between thrombosis extending from the lateral sinus, and ligation of the internal jugular vein. *Case* 2: The interest of the following case rests simply on the effect of treatment. At the end of July, 1879, a gentleman, about fifty years of age, had been bathing in the sea; the water was very cold, and on the following day he was attacked by severe earache. The earache proper soon subsided, but he became subject to violent seizures of neuralgic pain, with marked nocturnal exacerbations. The pain extended all over the left side of the head, but was most severe behind the ear. The hearing on this side became greatly impaired. On September 7 he came to London, the symptoms continuing the same. He had not slept for several nights, and was well-nigh worn out with pain. The membrane of the tympanum was sound, but the skin over the mastoid was red and very tender. The ticking of a watch could not be heard close to the ear. Leeches and hot sedative applications failed; the tissues over the mastoid became more red, tender, and swollen, and at one spot as large as the fingertip there was more elasticity than elsewhere. On September 11 a straight vertical incision was made down upon the bone, which was soft and easily penetrated with the knife, and a little pus escaped. Relief was immediate and complete; within a week the wound was all but healed; and the patient is now perfectly well, and his hearing as good as ever. The case showed, the author said, that in some instances an incision was all that was necessary, not only for the relief of intense suffering, but for complete recovery, by taking off the tension of the inflamed periosteum and superficial structures. If, however, the local pain continued after, or cerebral symptoms supervened upon the simple incision, perforation of the mastoid bone by the trephine or drill should be performed; whilst nothing short of trephining could be expected to do good in cases where rigors, tenderness on deep pressure, and œdema over the mastoid followed shortly after acute suppuration of the tympanum.

THE PRESIDENT thought the latter of the two cases was of especial interest. He detailed particulars of the case of a gentleman, who, after typhoid fever, had intense pain in the ear, accompanied by deafness, for which Mr. Hinton perforated the tympanum. But not until the mastoid process was trephined was relief obtained; this occurred with the discharge of pus from the wound, and the deafness was thereby cured.

Mr. MARSH had seen two similar cases in children, both of which were cured by trephining, although in one instance the child had been comatose before the operation.

Mr. BRYANT considered that early surgical interference in such cases was most desirable. He instanced a case of inflammation of the brain in a child, in which there was much tenderness over the mastoid process. This being cut down upon, its bone was found to be softened. The inflammation, however, subsided, and the child escaped with his life, but remained deaf. Another child, with inflammation of the brain, comatose and hemiplegic—these symptoms being due to inflammation of the ear—came under Mr. Bryant's care; and he had gouged out the external meatus, and had removed the ossicles of the middle ear. The parts were all found to be bathed with pus, which welled up from still deeper parts. The child, however, recovered, though with paralysis of the parts supplied by the portio dura. In other cases of inflammation of the brain, coming on in the course of otitis, the surgeon could do no harm by freely opening the middle ear and allowing the pus to escape, as deafness had been already produced by the disease.

Dr. F. TAYLOR inquired what was the condition of the optic disc in Mr. Morris's first case. He had seen a child suffering from mastoid disease, which had died with thrombosis of the jugular vein and pyæmia thereby caused, and apparent meningitis, in which there was, moreover, congestion of the optic disc, which seemed to confirm the diagnosis of meningitis; but in which case, after death, there was found to be no inflammation of the membranes of the brain.

Mr. BARKER remarked that the mastoid cells were but imperfectly developed in many bones. There were none in children; and this condition of their absence persisted in many cases into adult life. This was the result of his examination of over two hundred cases. Upon trephining deeply, therefore, the surgeon was very liable to open the lateral sinus. If there were an escape of pus from the mastoid, it usually occurred at about the level of the external auditory meatus

Trephining should be done at a level with the upper border of the external bony auditory canal. These cases of otitis should rather be dealt with at an early stage by incising the membrana tympani and washing out the middle ear. They then recovered, and a large mass of mastoid cell-disease was thereby avoided. This simple early treatment was certainly to be preferred.

Mr. Carrington remarked upon the physiological mechanism of the blindness in Dr. Taylor's cases.

Mr. Morris did not think that, in either of his cases, the eyes were examined; but there was in neither case any affection of the sight. In the second case there were no brain-symptoms. In the first case the earliest indication of brain-trouble was the fit, and death was due to thrombosis of the lateral sinus. The incision was made down to the bone, and, the periosteum being stripped off, pus escaped. A portion of the bone was found to be soft, into which a probe was passed, and pus thence freely escaped. It had been pent up between the dura mater and the bone. He (Mr. Morris) would hardly have thought there was so frequently a diminished development of the mastoid cells as Mr. Barker had indicated. The cells in his case opened into the external auditory canal, nearer its floor than its roof.

An Unusual Case of Cardio-Pulmonary Murmur.

Dr. F. Taylor read a paper on an unusual case of cardio-pulmonary murmur. The patient, a blacksmith by trade, aged thirty-eight, had suffered from his chest for twelve months. He was first taken ill with cold, clammy sweat, and continual cough and expectoration. The sweating stopped after a time, but the cough persisted, and he lost flesh. In February he gave up work. When first seen he was of ordinary build, rather spare, with anxious expression of face. He was spitting a good deal of dirty yellow phlegm, his breath was slightly fœtid, and he complained of a peculiar noise which he had heard in his chest for two or three months. The chest was flat, fairly symmetrical, and with a wide epigastric angle. The right side was practically normal; the left side, on the other hand, was nowhere healthy, and presented the physical signs of a considerable cavity in the anterior axillary line, just below the level of the nipple. At this point there was tympanitic percussion note, with marked cavernous breathing, and very distinct whispering repetition of the voice. Elsewhere on this side of the chest there was more or less impaired resonance, and even complete dulness, deficient on soft bronchial breath-sounds, and deficient vocal resonance, or whispering bronchophony, the physical signs being more marked below than above. In addition to this, there was audible over the whole chest a loud double sound synchronous with the heart's beat, and musical in quality. It was heard faintly on the right side and at points of the chest distant from the heart, loudly over the præcordia, louder at apex than base, and loudest in the anterior axillary line three inches from the nipple, at the point where there were the other physical signs of cavity. The sound could also be heard at a distance of twelve inches from the chest, and when he opened his mouth it was audible from a much greater distance, the vibrations being obviously intensified by resonance in their passage through the mouth, and giving one for the moment the impression that they actually originated in the larynx. These sounds were no doubt produced by the strokes of the heart against the walls of the pulmonary cavity; they were intensified by resonance in the interior of the cavity, and their unusual transmission to the pharynx and mouth was probably the result of a very free communication of the cavity with a bronchial tube.

Cancer of the Pylorus—Ulceration of the Cancerous Growth—Formation of an Abscess—Gangrene of Left Foot and Leg.

Dr. Whipham read a paper on the above subject. On November 27, 1879, a man, aged forty-eight, was admitted, under Dr. Whipham's care, into St. George's Hospital. The history went to show that symptoms of stomach disease declared themselves in October, 1878; that in January, 1879, he became an out-patient at St. Thomas's Hospital, when Dr. Greenfield discovered a hard mass, movable by respiration, in the region of the pylorus; the patient at this time suffered from pain and vomiting. In June the tumour was less evident to palpation, but the other symptoms persisting, the man was admitted into St. Thomas's, and after undergoing treatment there for a few weeks, was again made an out-patient, but was subsequently re-admitted in September. Merely a fulness over the pylorus was detected at this time. The vomiting, which had been a prominent symptom for eight months and a half previously, entirely ceased on July 16, 1879. When the patient was admitted into St. George's Hospital he was pale, complained of pain in the hepatic region, and of tenderness on upward pressure towards the under surface of the liver. No definite tumour could be detected, nor any enlargement of the spleen or lymphatic glands, although there was a sensation of fulness to the right of the gall-bladder. Microscopic examination of the blood showed a great excess of leucocytes in the field, most of which exhibited active amœboid movements; and subsequent examination of the blood on a warm stage showed far more active movements of these white corpuscles. On December 9 the abdominal pain had nearly ceased, and at once signs of gangrene appeared in the toes of the left foot, which extended until the lower two-thirds of the leg and the foot were involved. Shortly before death a minute quantity of albumen was found in the urine. At the post-morten examination the lower part of the femoral artery was found to be blocked by clot; an abscess was discovered lying between the stomach and the liver. The abscess was the result of ulceration of a cancerous growth affecting the pylorus; owing to the ulceration, perforation of the stomach had occurred, and thus an abscess had formed in the situation described. The points of interest in the case were:—1. The entire cessation of vomiting five months previously to the patient's death. 2. The disappearance of the tumour, or perhaps the concealment of the swelling, owing to the formation of the abscess. 3. The occurrence of gangrene. 4. The apparent increase of the white corpuscles in absence of any great enlargement of the spleen or lymphatic glands. It was suggested that this apparent increase of leucocytes might have been due rather to a deficiency of the red corpuscles. 5. The entire absence of that dryness and want of elasticity of the skin which are so characteristic of cancer.

A Case of Unilateral Morphœa, with Exostoses and Corneal Opacity.

Mr. Streatfeild read a paper on a case of unilatera morphœa, with exostosis and corneal opacity, and also showed the patient. He said: The case which I have the honour to bring before the Society is one very interesting to many, but it is not essentially an eye case. James B., aged forty-five, agricultural labourer, came to the Moorfields Eye Hospital three weeks ago for impairment of vision of left eye. In infancy, he told me, he had had a "strong" inflammation in that eye, and that he had often had a "cold" in it; but this has probably nothing to do with his present state. On admission, all the lower exposed part of the cornea of the left eye was opaque. The opacity was ill-defined, and extended upwards beyond the centre of the cornea. There was no redness at any part round the cornea, no zone as in any ordinary keratitis, nor any other sign of inflammation of the eye. But it did not seem like an old opacity, and his eyesight had only been so bad for a fortnight before he came to the hospital. The eyelids could not be widely opened, and all the movements of the eyeball were limited. He has now been three weeks an in-patient, and the corneal opacity is much less in extent, and his vision, therefore, considerably improved since his admission. The state of the cornea seemed to me to resemble in appearance the preliminary irregular opacity of the cornea which is seen to occur from nutritional change or otherwise in some cases of paralysis of the fifth nerve. There was, however, no insensibility of the cornea. Then I observed the peculiar brawny condition of the skin and subcutaneous parts of the left side of the face, that his face had no wrinkles on that side, and, within the mouth, the exostosis of the lower jaw and of the hard palate on the same side. He told me that six months ago he could hardly open his mouth at all. Mr. Hutchinson informs me that, irrespective of the eye affection, it is a case of extreme rarity, and he will favour us with some notes of this and of another similar case.

Mr. Hutchinson said the case was of interest, as it exhibited altered nutrition in various tissues connected with the fifth nerve. In the skin there was unilateral scleriasis; the forehead and neck felt brawny and tense; there was, in fact, fifth-nerve morphœa. There was no defect of sensation in the skin, and no defect of power in the muscles supplied by the fifth nerve. There were unilateral exostoses about the mouth in the left halves of both the upper and lower jaws. In a skull exhibited

by Mr. Hutchinson, and already described in the *Pathological Society's Transactions*, there were exostoses in the same situations as in Mr. Streatfeild's case. Both were due to disturbances of nutrition, to overgrowth of one part, and undergrowth of another. The man now exhibited could not move the eye perfectly, the impaired nutrition being probably due to a sclerosed condition of the cellular tissue of the orbit, and not to paralysis of the muscles of the orbit, as all the orbital muscles were equally weakened, while none were perfectly paralysed. The movements of the iris were perfect. The ulceration of the cornea was just at that point, too, where the cornea rested against the hardened edge of the lower eyelid, which was as tough as leather. Morphœa was probably a disease of the vaso-motor filaments of the fifth nerve.

The PRESIDENT next delivered a short address respecting the work of the session just concluded; and the meeting ended.

NEW INVENTIONS AND IMPROVEMENTS.

GALE AND CO.'S HYPOPHOSPHINE.

WE had occasion, a short while ago, to notice with approval Broomhead's emulsion of cod-liver oil, pepsin, and hypophosphite of lime, as a good means of exhibiting tried remedies. We have now received from Messrs. Gale and Co., of Bouverie-street, E.C., an excellently made emulsion, consisting of cod-liver oil and four of the hypophosphite salts. Not long ago, Dr. Frederick Churchill, in a paper on hypophosphites, remarked that with the exception, perhaps, of cod-liver oil, no remedy had been so largely used, of late years, as "chemical food." But he was of opinion that the salts contained in that preparation are not in a condition favourable to assimilation, and that the quantity of sugar in it is not altogether advisable. He recommended the employment of a preparation somewhat similar to Parrish's in composition and properties, but which should be an actual solution of the salts of the hypophosphites, prepared according to a definite process, instead of merely a suspension of salts in syrup, and should have phosphorus in a higher and more active state of combination. Dr. Churchill gave a formula for such a preparation, that might be administered alone or with a light wine, and which, in his hands and those of others, had proved highly useful. Messrs. Gale have combined this solution of hypophosphites with such a wine as Dr. Churchill recommended, and with cod-liver oil, each ounce of the composition containing three grains of ferrous hypophosphite, four grains each of the calcium and sodium hypophosphites, and two grains of the magnesium hypophosphite. The value of cod-liver oil as a remedy is, it need not be said, established beyond question or doubt; but we venture, in spite of some authorities, to say that the position and usefulness of the hypophosphites have yet to be determined, and consequently the value of hypophosphine as a remedy has to be proved. But it is assuredly well calculated to be of great use as a medicinal food in conditions of debility or exhaustion from deficient development, overwork, or disease; and it is unquestionably an elegant and agreeable preparation. We cannot say that the smell of the cod-liver oil in it is quite disguised, but the taste undoubtedly is; and patients of any age will, we should think, take the remedy very readily.

EFFERVESCING SOLIDIFIED LIME-JUICE PASTILLES.
EFFERVESCING CITRATE OF IRON AND SULPHATE OF MAGNESIA.

THESE preparations, brought out by the well-known pharmaceutists, Messrs. Young and Postans, of Baker-street, Portman-square, are well worthy of notice. The effervescing solidified lime-juice pastilles are prepared by evaporating lime-juice down to so concentrated a state that when combined with sugar and mixed with bicarbonate of soda it forms an effervescing pastille, corresponding in value to its own weight of fresh lime-juice. The pastilles are very pleasant and refreshing, and are likely to be popular. The granular citrate of iron and sulphate of magnesia contains in a teaspoonful five grains of ammonio-citrate of iron, and five grains of sulphate of magnesia. The compound effervesces well and quickly, and affords a very pleasant way of taking two valuable medicines. It deserves to come largely into use.

FELLOWS' COMPOUND SYRUP OF HYPOPHOSPHITES.

THIS preparation contains hypophosphites of iron, quinine, strychnia, manganese, lime, and potassa. One teaspoonful of it contains a proportion of hypophosphite of strychnia equal to one-sixty-fourth of a grain of pure strychnia, and is the medium dose for an adult. It is a clear, colourless syrup, and is not disagreeable to the taste; but it must be kept carefully corked, and in a cool place; and as a slight precipitate settles to the bottom after a while, it should be well shaken up before being used. It comes to us strongly recommended by several of our Canadian brethren. The London agents for the preparation are S. M. Burroughs and Co., Snow-hill, Holborn-viaduct, E.C.

KEPLER MALT EXTRACT, WITH COD-LIVER OIL AND PHOSPHORUS.
KEPLER MALT EXTRACT, WITH IRON (FERRATED).

WE some time ago recommended the Kepler malt extract as being especially good and reliable, and we now draw attention to the combinations of the malt extract with various other remedies that are prepared by the "Kepler" Malt Extract Company, 8, Snow-hill, Holborn-viaduct, E.C. Two of these compounds are named above; and the Company supply also the malt extract in union with hops, with the hypophosphites, with citrate of iron and quinine, and in some other useful dietetic or medicinal combinations. We may note also that the Company are willing to prepare any other possible combinations with their well-tried and well-proved malt extract that medical men may desire to have.

MEDICAL NEWS.

QUEEN'S UNIVERSITY IN IRELAND.—At a meeting of the University, held on Monday, June 21, in the Council Chamber, Dublin Castle, Sir R. Kane, LL.D., F.R.S., Vice-Chancellor, conferred the following degrees and diplomas:

Degree of Doctor in Medicine.—John Howard Battye, of Queen's College, Belfast; George J. Coates, of Queen's College, Cork; John J. Dinnis, of Queen's College, Cork; Arthur Hickman, of Queen's College, Galway; Edward Horan, of Queen's College, Cork; Daniel Lehane, of Queen's College, Cork; William J. Matthews, of Queen's College, Belfast; William T. Mullally, of Queen's College, Galway; Patrick Mullane, of Queen's College, Cork; James Mullin, of Queen's College, Galway; John F. L. Mullin, of Queen's College, Galway; Menus W. O'Keeffe, of Queen's College, Cork; Samuel Townsend, of Queen's College, Cork.

Degree of Master in Surgery.—Dr. Charles Hall, of Queen's College, Belfast; Dr. John Hosford, of Queen's College, Cork; Dr. Charles Frederick Knight, of Queen's College, Cork; Dr. John Martin, of Queen's College, Galway; Dr. William Smyth, of Queen's College, Belfast; Dr. William Stokes, of Queen's College, Galway; Dr. John Wilson, of Queen's Colleges, Belfast and Cork; Dr. Ralph Worrall, of Queen's College, Belfast; George G. Coates, of Queen's College, Cork; John J. Dinnis, of Queen's College, Cork; P. Mullane, of Queen's College, Cork; Menus W. O'Keeffe, of Queen's College, Cork; Samuel Townsend, of Queen's College, Cork.

Diploma in Midwifery.—Dr. William Stokes, of Queen's College, Galway; George J. Coates, of Queen's College, Cork; Patrick Mullane, of Queen's College, Cork; Menus W. O'Keeffe, of Queen's College, Cork.

APOTHECARIES' HALL, LONDON.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, June 17:—

Cooper, William Astley, Widnes, Lancashire.
Erson, William Robert, Easingwold, Yorkshire.
Harries, Arthur John, Tufnell-park-road, N.
Prothero, Richard, Everton-road, Liverpool.
Tucker, Joseph, Chulmleigh, North Devon.

The following gentlemen also on the same day passed their Primary Professional Examination:—

Coveney, John, London Hospital.
Harris, Walter Thomas, Guy's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to all new Appointments that take place.

WHITEHOUSE, JOHN, M.R.C.S., L.R.C.P.—House-Surgeon to St. Peter's Hospital, 54, Berners-street, W., *vice* D. G. Johnston, M.B., C.M.

BIRTHS.

BENTHALL.—On June 15, at Amyand House, Twickenham, the wife of Albert Benthall, M.R.C.P., of a son.

DE LA COUR.—On June 20, at 282, Camden-road, N.W., the of G. F. De la Cour, M.D., of a son.

GREEN.—On June 19, at Wimpole-street, the wife of T. Henry Green, M.D., of a son.

GREENFIELD.—On June 17, at 15, Palace-road, S.E., the wife of W. S. Greenfield, M.D., F.R.C.P., of a daughter.

HOPKINS.—On June 18, at 88, Highbury New-park, the wife of Alfred Boyd Hopkins, M.R.C.S., of a son.

REDFERN.—On June 17, at Templepatrick House, Donaghadee, the wife of Peter Redfern, M.D., Professor of Anatomy and Physiology, of a son.

TOWNSEND.—On June 13, the wife of Knowlson Townsend, M.R.C.S., L.R.C.P., of a son.

WILLIAMS.—On June 18, at Brixton-hill, the wife of T. W. Wynn Williams, M.R.C.S., of a son.

MARRIAGES.

BURRELL—MONCKTON.—On June 21, at Maidstone, Joseph Arthur Burrell, Esq., to Mina Louisa, eldest daughter of S. Monckton, M.D., F.R.C.P., of Maidstone.

FORRESTER—JUSTICE.—On June 22, at Cheltenham, James S. Forrester, Surgeon, Army Medical Department, to Marie Clarisse, eldest daughter of the late Rev. John Justice, Rector of Ightfield, Whitchurch, Shropshire.

HEDDY—LATTER.—On June 22, at South Kensington, William Jackson Heddy, M.R.C.S., of 25, Hollywood-road, South Kensington, to Laura Mary, second daughter of Laurence Latter, of 98, Redcliffe-gardens, and Horns Lodge, Tonbridge, Kent.

SAYLE—JONES.—On June 14, in London, John James Henry, youngest son of the late G. Sayle, M.D., of King's Lynn, to Laura Octavia Hardman, daughter of R. Jones, M.D., of Waterloo-place, Leamington.

VINCENT—THELWELL.—On June 21, at East Dereham, Norfolk, Henry Bird Vincent, M.R.C.S., to Emily Martha, widow of the late Francis Thelwell, Esq., I.C.S., Bombay Presidency.

WATTS—CASTLE.—On June 17, at Carisbrooke, Isle of Wight, Edward John Pierce Watts, Esq., of Castle Villa, Carisbrooke, to Mary Rebecca, eldest daughter of Henry Castle, M.D., of Newport, Isle of Wight.

WHITE—JONES.—On June 21, at Chiswick, William Glendenning, eldest son of Dr. White, of Chiswick, to Isabella Maude Stuart, eldest daughter of Richard Jones, Esq., of Chiswick.

WILDY—ADAMS.—On June 17, in London, Arthur, third son of Augustus Samuel Wildy, of Regent's-park-road, to Edith, only daughter of William Adams, F.R.C.S., of Harrington-square, London, N.W.

DEATHS.

BLUETT, FANNY, wife of John Bluett, M.R.C.S., formerly of St. John's-wood, London, at Chesterfield, on June 15, aged 56.

CUMMING, ELEANORA SCOTT SOMERVILLE, wife of William Cumming, M.D., at 13, Ainslie-place, Edinburgh, on June 17.

DUKES, ANNIE LOUISA, third daughter of E. Dukes, M.R.C.S., of 52, Marquess-road, Canonbury, at the residence of F. Feltoe, Esq., Beckenham, on June 19, in the 32nd year of her age.

GRIFFIN, WILLIAM ROYLE MORTIMER, M.R.C.S., L.S.A., of Rock House, Alphington, Exeter, and late of Real del Monté, Mexico, aged 59.

HOLROYDE, ELKANAH, F.R.C.S., J.P., late of The Clough, Bolton-by-Bowland, Yorks, and formerly of Manchester, at Clough House, Sydenham, on June 19, in his 78th year.

MACKIE, JAMES WILLIAM REID, M.D., F.R.C.S., of Cupar-Fife, at Callander, on June 20.

SEYMOUR, ALMERIC W., M.D., of 18, Montpelier-place, Brighton, on June 16, aged 49.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

GREAT NORTHERN HOSPITAL, CALEDONIAN-ROAD, LONDON, N.—Physician for Out-patients. (*For particulars see Advertisement.*)

HOSPITAL FOR WOMEN, SOHO-SQUARE, W.—House-Physician. Candidates must have a recognised medical or surgical qualification. (*For further particulars see Advertisement.*)

HUDDERSFIELD INFIRMARY.—Junior House-Surgeon. Candidates must possess one registered qualification. Applications, with testimonials, to be sent to the Secretary on or before June 29.

ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY, WIGAN.—Senior House-Surgeon. The successful candidate must undertake not to practise in the Wigan Union for a period of three years. Applications, with recent testimonials, to be sent to Will. Taberner, Esq., Secretary, before June 30.

ST. GEORGE'S HOSPITAL.—Assistant-Surgeon. Candidates must be Fellows of the Royal College of Surgeons of England, and registered under the Medical Act of 1858. Applications to be sent to the Secretary at the Hospital on or before July 3.

WILTON UNION.—Medical Officer and Public Vaccinator. Applications, with certificates of qualification and testimonials, to be sent to Mr. Geo. W. Wilson, Clerk to the Guardians, 12, Bridge-street, Salisbury, before June 29.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, WOLVERHAMPTON.—Surgeon. Candidates must be Fellows or Members of the Royal College of Surgeons in London, Edinburgh, or Dublin. Applications, with testimonials, to be sent to the Secretary on or before June 28.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Newcastle-in-Emlyn Union.—Mr. James Thomas has resigned the Cenarth District: area 38,138; population 7238; salary £50 per annum. Also the Workhouse: salary £10 per annum.

Scarborough Union.—Mr. S. H. Edgelow has resigned the Scarborough District: area 2348; population 24,259; salary £130 per annum.

APPOINTMENTS.

Carlisle Union.—Frederick John Fehrson, M.B. and C.M., to the Dalston District.

Chorlton Union.—John S. Main, B.M., M.C. Univ. Glasg., as Assistant Medical Officer of the Workhouse.

Huddersfield Union.—David Wilson, M.B., C.M., to the Paddock District.

Liverpool Parish.—William Whitford, M.D., M.Ch. Queen's Univ. Ire., to the Fifth District.

Wallingford Union.—William C. Byass, M.R.C.S. Eng., L.S.A., to the Dorchester District.

West Derby Union.—Arthur Henry Boucher, M.B. and C.M. Edin., as Assistant Resident Medical Officer at the Workhouse.

Whitby Union.—Thomas Tinley, L.R.C.P. Edin., L.F.P.&S. Glasg., L.S.A. Lond., to the Fylingdales District.

York Union.—William T. H. von Beverhoudt, M.R.C.S. Eng., L.R.C.P. Edin., to the Sixth District.

DENTAL EXAMINATIONS.—The following were the questions submitted to the seven candidates for the Licence in Dental Surgery of the Royal College of Surgeons, at a meeting of the Board of Examiners on the 21st inst., when they were required to answer at least one of the two questions on each subject, viz.:—Anatomy and Physiology: 1. Describe the superior maxillary bone, including its connexions with other bones. 2. Describe the act of deglutition; and state how the larynx is protected from the intrusion of food. Surgery and Pathology: 1. How would you treat a fracture of the horizontal ramus of the lower jaw? 3. Define what is meant by the word ulceration; and describe how an ulcer is treated. The candidates were required to answer at least two out of the three questions in each of the following subjects, viz.:—Dental Anatomy and Physiology: 1. Describe specimens under the microscope I, II, III. 2. Describe the anatomical conditions which would be displayed by a vertical section across the lower jaw through the second temporary molar at the age of six years. 3. Describe the dentition of the Proboscidea, and the structural differences between the molars in the two existing species of *Elephas*. Dental Surgery and Pathology: 1. What are the causes and characteristics of hæmorrhage after tooth extraction, and what treatment should be adopted in such cases? 2. Describe a dentigerous cyst, the causes which may lead to its formation, its diagnosis, and treatment. 3. Mention the materials employed for filling teeth, and the various forms in which they are used; and describe the methods and advantages of their respective employment.

THE Worshipful Company of Goldsmiths have granted a second donation of £50 to the Association for the Oral Instruction of the Deaf and Dumb, 11, Fitzroy-square, W.

FOREIGN BODIES IN THE ŒSOPHAGUS IN CHILDREN.—Dr. Lannelongue, in a communication to the Société de Chirurgie, stated that during the three years he has been Surgeon to the Ste. Eugénie Hospital, he has extracted foreign bodies from the œsophagus eighteen times in children from eighteen months to six and a half years of age. In thirteen instances these were pieces of money, and in most of the others the articles came from toy houses. Children to whom this accident occurs do not usually own it for fear of being scolded, and it is only when unpleasant symptoms occur that they complain. These symptoms generally consist in difficulty in swallowing, pain with disturbances of respiration and phonation, often of reflex origin. Some time usually elapses before the child is brought to the surgeon, who has first to assure himself whether a foreign body is really present. He explores the pharynx first by his finger, and then with an olivary sound, the action of this latter against the foreign body being often unperceived in consequence of the latter becoming surrounded by mucus and fragments of food. For this reason Graefe's basket is often more useful, as it may succeed in catching the body, although no friction with this has been felt. All the pieces of money in the thirteen cases were fished up by its aid. In one of the cases a miniature flask of curaçao could be felt by the sound, but was not extracted for fear of breaking it, and at the end of three days it was passed per anum. Dr. Lannelongue mentions also two cases occurring in adults. In one an onion was swallowed, and having given rise to alarming suffocative symptoms, was crushed by means of a *brise-pierre*. In the other, an old woman declared she felt a pin which she had swallowed. This was simply a delusion, and Dr. Lannelongue having pretended to remove it, the delusion vanished.—*Gaz. Méd.*, June 12.

A BARGAIN!—"For sale, cheap, an office, horse, buggy, and stable, together with a good practice, in a new part of the country. No opposition. All for 300 dollars cash.—Address, D. S. Lane, Flint, Mich."—*Louisville Med. News.*

STATISTICAL SOCIETY.—The forty-sixth Anniversary Meeting will be held on Wednesday, the 30th inst., at 4 p.m., in the Society's Rooms, King's College entrance, Strand, to receive the report of the Council for the past year, and to elect the President, Council, and officers for the year ensuing.

COMPULSORY VACCINATION AND REVACCINATION IN FRANCE.—The Paris medical journals are exerting themselves greatly in favour of Dr. Liouville's Bill now before the Chambers, and have published many documents showing the urgency there is for new legislation. Dr. Blot, the Director of Vaccination at the Academy of Medicine, in an article in the *Gazette Hebdomadaire* (June 11), gives, as a specimen of the extent to which vaccination is neglected, the ages of the children who were vaccinated at the Academy during 1877. These were as follow:—From birth to one month, 164; from one to two months, 41; from two to three months, 161; from three to four months, 176; from four to five months, 174; from five to six months, 114; from six months to a year, 699; from one to two years, 450; from two to three years, 206; from three to four years, 120; from four to five years, 57; and above five years, 91: total, 2453. Thus more than a fourth of those vaccinated were from six months to a year old, about a fifth were from one to two years old, and 91 were more than five years of age! So also of 218 children vaccinated at Grenoble by Dr. Bernard, 27 were more than two years of age, 15 more than three, 11 more than four, and 7 more than five. Dr. Blot terminates his paper by saying that although the making of vaccination compulsory will be an excellent thing, it will not be enough, and that what is wanted is that panacea for every social evil, a congress, at which an international convention may be agreed upon, by the operations of which the ravages of small-pox will become so attenuated that it will almost disappear from the nosological list.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

D.—It will depend entirely upon whether the infant breathed or not.

Dr. Williams.—We are sorry to confirm the report that Mr. Frank Buckland is confined to his room, from a severe attack (we are informed) of hæmoptysis. It is not generally known that the naturalist is a member of the College of Surgeons.

A Fellow, Manchester.—There are 1233 Fellows of the Royal College of Surgeons, with whom alone the election rests. The members, numbering about 16,000, have no voice in the matter.

Opposition to a Cabmen's Shelter.—The cabmen's shelter which was recently removed from the Strand near St. Clement's Danes, on a more commodious one being substituted for it, was, at the request of a large body of cab-drivers, conveyed to, and erected near, the "Elephant and Castle," Newington. Immediately an agitation was commenced against it by some of the publicans and coffee-house keepers in the neighbourhood. Pressure was also put upon the Southwark Vestry to obtain the removal of the offending structure. A petition signed by aggrieved ratepayers was presented to that effect, and the Roads Committee reported against the retention of the shelter. The cabmen, however, presented a petition, signed by 650 cab-drivers, to the Vestry, expressing their appreciation of the convenience and comforts to them of the shelter, and prayed that it might be allowed to remain. After considerable discussion the Vestry decided, we are glad to say, in favour of the cab-drivers, and the shelter will remain.

A Fellow.—Write to the Secretary. We can, however, inform you that, not having signed the by-laws, you will not be allowed to record your votes. The voting will commence soon after two o'clock on Thursday, the 1st prox. You can attend the meeting and the dinner after.

L.D.S.—You will find your wish complied with on another page. There are now nearly 500 Licentiates in Dental Surgery of the Royal College of Surgeons. The person mentioned was, we understand, twice rejected, but has since obtained the licence from the Irish College of Surgeons, and is now practising in the West of England. We must decline answering the remainder of your letter for obvious reasons.

Paterfamilias, Lincolnshire.—British Honduras bears a very bad character as regards climate. It is tropical and hot; there are many disagreeable matters to put up with, but, on the whole, official reports say it is a country where Europeans, with reasonable care and steady habits, may live for years in the enjoyment of excellent health. Resident medical men agree in classing the climate as superior to Jamaica or other West India Islands. There is one general hospital in the colony; it is situate in Belize, is in a good position, and may generally be considered in fair order and condition.

How the London Water Companies Prosper.—At the half-yearly meeting of the Southwark and Vauxhall Water Company, last week, the Chairman congratulated the proprietors on their increased prosperity. The increase in the water-rents, he said, were from £85,000 in the corresponding period of 1879, and £87,000 last half-year, to £90,000 this half-year.

A Foreign Student.—Yes; in France, Germany, Russia, Italy, and Spain, honours and rewards from the State await medical men who have been useful to their country; but in England no public recognition beyond a baronetcy is given to men in the profession who have deserved public gratitude as benefactors to humanity. A tribute was, it is true, paid to the discoverer of vaccination—albeit an inadequate reward.

Vaccinator.—In the *Medico-Chirurgical Transactions* for 1853, Marson's investigations are published.

Urban and Rural Sanitary Works.—The trustees of Sir Richard Watt's Charity, at Rochester, have decided to erect 100 model cottages for the working-men of the city. This will be a great boon, as there is at the present time much overcrowding amongst these classes.——A new park, presented to the town by Mr. H. F. Beaumont, of Whiteley Hall, comprising between twenty and thirty acres, situate at Dungeon Wood, in the Lockwood ward of Huddersfield, is in course of adaptation as a pleasure park for the inhabitants. It will be known as the "Beaumont Park."——A convalescent home, in connexion with the Royal Infirmary, Isle of Wight, is being built.——The works of the Native Guano Company, Aylesbury, were officially visited last week by the Manchester Sewage Committee. Much satisfaction was expressed with the results obtained, and the improvements effected with a view to increasing the mechanical simplicity of the process. A bright, clear effluent was obtained during the visit, and copious notes were taken with the object of preparing an official report to the Manchester authorities.——The Manchester Poor-law Guardians have erected new out-relief buildings. They comprise administrative buildings, male and female tramp wards, and temporary lunatic wards.——The Salisbury Town Council have resolved to adopt the same system at that at Taunton, with modifications for the disposal of the sewage of the city. The sewage will flow into tanks, and will then be dealt with by a chemical process.——The Local Board of St. Helen's, Lancashire, have ordered plans and estimates to be made for a scheme of sewerage for the borough.——The Town Council of Stratford-upon-Avon have applied to Mr. Bailey Denton, C.E., to advise them on the best means to be adopted for the disposal of the sewage of the borough.——From the thirty-sixth report, just issued, of the Metropolitan Association for Improving the Dwellings of the Industrial Classes, it appears that since the last annual meeting seventy-eight improved dwellings have been erected at Hoxton, seventy-two more are in course of erection in the Stoke Newington-road, and on the remaining portion of this site ninety-six additional dwellings can be built in 1883. An average population of 5375 dwells on the property of the Association, and the average mortality during the year shows, in comparison with the whole of the metropolis, a rate of 18·8 per 1000 against 23·3 per 1000.

A Schoolmaster Fined for Excessive Punishment.—Cases of punishment in schools, although often unreasonable in their severity, are rarely submitted to magisterial investigation. But the conviction of the offending master or assistant for such an offence should be noticed. The master of the National School, Rinslip, was summoned at the Petty Sessions, Uxbridge, for assaulting an orphan child, aged ten years, who is boarded out at Rinslip by the Uxbridge Board of Guardians. Upon the evidence adduced on the whole case the magistrates decided that the girl had been too severely punished, and imposed a fine of 15s.

Increase of Insanity.—The Paddington Board of Guardians have referred to their medical officer a letter, addressed to the Board by the visitors of the Colney Hatch Asylum, on the non-desirability of retaining in the workhouse cases of senile dementia or impaired intellect, in order that more room may be available for the accommodation of acute cases in the Asylum.

Citizen.—Sanction was given by Parliament, in 1877, to the construction, by the Metropolitan Board of Works, of the proposed new street from Charing-cross to Tottenham-court-road. It is one of twelve improvements sanctioned by the Act, some of which are far advanced.

M. and N.—Yes, it is true that during the first ten weeks of the year 1879, influenced by the severe weather, the death-rate in London averaged 26·3 per 1000.

"Free from Debt."—At a committee-meeting of the Queen's Hospital, Birmingham, on the 15th inst., it was announced that for the first time in the history of that institution it was "free from debt." This satisfactory financial position was mainly due to the recent bazaar held in the Town Hall in aid of the Hospital, which yielded a net sum of nearly £6000.

Vigilans.—In the ten years from 1869 to 1878 the sum advanced by the Public Works Loan Board amounted to £20,580,000, most of this sum being advanced during the last five years of the period. Of this large amount it must be remembered that much of the increase is due to sums borrowed for the purpose of the Public Health, the Artisans' Dwellings and Education Acts. By the "Public Works (Loans) Bill," passed last session, no one body is allowed to borrow more than £100,000 in one year.

"*Look at me!*"—At one of the Urban Club festivals, George Cruikshank and Planché were present. The former, holding up a glass of water in his demonstrative manner, said to the latter, "Look at this—and look at me!" The latter, in his usual quiet manner, said to Cruikshank, "My dear sir, I take a glass of wine at luncheon, another at dinner, and after dinner I take my pint of wine, and sometimes at night my glass of grog. Pray look at me!" Both were octogenarians.

Street Casualties.—Deodands were abolished by Act of Parliament in 1846. More stringent regulations for the metropolitan street traffic no doubt are urgent. The law of deodands is thus declared by Bracton—"If a horse, or ox, or other animal, of his own motion kill, as well an infant as an adult, or if a cart run over him, they shall in either case be forfeited as deodands—which is grounded upon this additional reason, that such misfortunes are in part owing to the negligence of the owner, and therefore he is properly punished by such forfeiture." Probably, if every van, cart, or carriage that killed a man in London were forfeited, it would lead to an immediate diminution of the deaths in the street; at least, it would have the effect of making every owner of a conveyance take the utmost care, by appointing a skilful driver, and by other precautions, to prevent casualties. Many accidents no doubt occur, as Lord Fife remarked a few days since in the House of Lords, which, by the exercise of care and precaution, might be prevented; and therefore, as to those heedless of such care, he thought nothing could be done by the central authority to protect them. Although the deodand cannot be revived in its old form, the cause and prevention of fatalities and accidents in the streets might with advantage be inquired into by a Commission. These casualties are an evil of a magnitude deserving such an investigation.

COMMUNICATIONS have been received from—

Dr. Hollis, Brighton; The Treasurer of St. Thomas's Hospital; The Secretary of the Odontological Society; Surgeon-General Gordon, London; Mr. Reginald Harrison, Liverpool; The Honorary Secretary of the Obstetrical Society; Mr. James Robinson, Rochfield, near Bolton; The Assistant-Secretary of the Epidemiological Society; The Registrar of the Apothecaries' Hall, London; Dr. E. Herman, London; Mr. J. Chatto, London; Mr. Clarence Foster, Leeds; Mr. P. Hinckes Bird, London; The Registrar-General of Edinburgh; Dr. W. Squire, London; The Secretary of the Statistical Society, London; Messrs. Wm. Woollams and Co., London; Mr. David Morgan, Brighton; The Dean of the Dental Hospital of London.

BOOKS, ETC., RECEIVED—

Des Gommes Syphilitiques, par le Dr. Emile Nitot—Evidence on the Closing of Public-houses on Sundays, given by Edward Whitwell, Esq.—Brooks' Popular Botany—Annual Report on the Condition of the Combined Sanitary District of West Sussex—L'Infection Purulente, ou Pyohémie, par le Dr. Maurice Jeannel.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Centralblatt für die Medicinischen Wissenschaften—Nature—Revue Médicale—Occasional Notes—Gazette Hebdomadaire—Revista de Medicina—Canadian Journal of Medical Science—Students' Journal and Hospital Gazette—Louisville Medical News—Centralblatt für Gynäkologie—American Bookseller—Boston Medical and Surgical Journal—North Carolina Medical Journal—Philadelphia Medical Times—Western Weekly News, June 19.

APPOINTMENTS FOR THE WEEK.

June 26. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

28. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

29. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

30. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Lister), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.; National Orthopædic, Great Portland-street, 10 a.m.

July 1. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

2. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, June 19, 1880.

BIRTHS.

Births of Boys, 1187; Girls, 1181; Total, 2368.
Corrected average in the 10 years 1870-79, 2566·7.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	661	582	1243
Average of the ten years 1870-79, corrected to increased population	707·9	656·6	1364·5
Deaths of people aged 80 and upwards ...	...	...	31

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	10	9	...	14	...	2	...	1
North ...	751729	1	3	9	2	14	...	2	...	8
Central ...	334369	...	2	2	3	3	...	2	...	4
East	639111	...	2	21	...	12	...	4	...	6
South	967692	5	6	18	4	13	...	4	...	2
Total	3254260	6	23	59	9	56	...	14	...	21

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·805 in.
Mean temperature	58·9°
Highest point of thermometer	74·4°
Lowest point of thermometer	46·1°
Mean dew-point temperature	53·9°
General direction of wind	Variable.
Whole amount of rain in the week	0·88 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, June 19, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1880.*	Persons to an Acre. (1880.)	Births Registered during the week ending June 19.	Deaths Registered during the week ending June 18.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Centimetres.
London	3664149	48·6	2368	1243	74·4	46·1	58·9	14·94	0·88	2·24
Brighton	107321	45·6	55	30	74·6	44·9	58·4	14·66	0·56	1·42
Portsmouth ...	134224	29·9	94	32	...	...	...	...	...	...
Norwich	85827	11·5	60	44	73·8	45·0	58·5	14·72	0·38	0·97
Plymouth	74993	53·8	56	22	70·4	52·2	57·2	14·00	0·49	1·24
Bristol	213536	48·0	133	76	72·0	50·1	57·3	14·06	0·83	2·11
Wolverhampton ...	75970	22·4	59	26	73·4	46·5	55·6	13·12	0·64	1·63
Birmingham ...	394738	47·0	285	136	78·0	49·2	58·4	14·66	0·30	0·76
Leicester	129912	40·6	98	37	72·2	47·5	56·8	13·78	0·43	1·09
Nottingham ...	173627	17·4	132	61	79·9	44·6	57·6	14·23	0·33	0·84
Liverpool	544056	104·4	493	280	72·1	50·4	56·8	13·78	0·80	2·03
Manchester ...	363130	84·6	275	148	...	...	...	...	...	...
Salford	185786	35·9	133	80	...	...	...	...	...	...
Oldham	115413	24·7	76	42	...	...	...	...	...	...
Bradford	197196	27·3	156	77	71·1	49·1	55·7	13·72	0·36	0·91
Leeds	318929	14·8	235	96	70·0	47·0	56·4	13·55	0·17	0·43
Sheffield	304938	15·5	207	130	72·0	46·0	55·2	12·89	0·48	1·22
Hull	149627	41·2	112	55	74·0	45·0	54·3	12·39	0·88	2·24
Sunderland ...	116730	42·2	106	56	70·0	49·0	55·1	12·84	0·37	0·94
Newcastle-on-Tyne	149366	27·8	107	46	...	...	...	...	...	...
Edinburgh	229839	54·8	158	83	...	...	...	...	...	...
Glasgow	589598	97·7	393	244	...	...	...	...	...	...
Dublin	314666	31·3	176	237	66·3	41·7	56·7	13·72	0·10	0·25
Total of 23 Towns in United Kingdom	8633571	39·2	5967	3281	79·9	41·7	56·9	13·83	0·59	1·27

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·81 in. The highest reading was 29·96 in. on Thursday, and the lowest 29·51 in. at the end of the week.

* The figures for the English and Scottish towns (except for Nottingham, Salford, and Oldham) are the numbers enumerated in April, 1871, raised to the middle of 1880 by the addition of nine years and a quarter's increase, calculated at the rate which prevailed between 1861 and 1871. Revised estimates have been adopted for Nottingham, Salford, and Oldham, based upon special returns of inhabited houses existing within those boroughs; the population of Dublin is taken as stationary at the number enumerated in April, 1871.

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